

EDITED: critic|all PRESS + Departamento de Proyectos Arquitectónicos (ETSAM - UPM)
ISBN: 978-84-09-29471-8
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critic|all

IV International Conference
on Architectural Design & Criticism

Saõ Paulo 25-26 March 2021

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01 Presentation

This fourth edition of Critic|all Conference consolidates the initiative that the Architectural Design Department of Madrid School of Architecture ETSAM UPM started some years ago to provide an international forum for criticism. This time, with a join event co-organized with Facultade de Arquitetura e Urbanismo of Sao Paulo University FAU USP, the Conference enhances its scope as a place of knowledge production from which to convene relevant voices around the proposed topic at each edition.

We would like to thank all participants for their work and trust, as well as the members of the Scientific Committee for their effort and commitment in a quite hard time for everyone all over the planet.

We would like to reinforce the idea contained in the conference's name. Critic|all is a call on criticism, and also a call for all. An appointment that, beyond the scope of each edition, we hope will be able to enhance a more general debate on the role of architecture in the present context.

Silvia Colmenares & Leandro Medrano

Directors of Critic|all

02 Call for Papers

#dual-ectics

The binary structure of the dual seems to have lost its status. Too simple to hold the complexity of our current world, too attached to the dichotomist schematism that splits positions into for and against. However, the implicit symmetry of the dual should not make us overlook the advantages of taking things in pairs.

Comparison is at the base of any intellectual activity committed to the production of knowledge, because meaning mostly stems from the observation of difference. As a primary scientific device, it generally addresses the task of confirming or refuting a certain hypothesis or theory. By pointing out the coincidence or divergence between the two terms of the comparison, it tends to rely on a logic of causality in order to proceed towards a generalization. Yet, in its barest form, comparison can also pursue a purely interpretive goal. Such is the case of analogy, based on the premise that the two terms paralleled are not at all equal, except from a specific point of view. Analogic reasoning proceeds from the particular towards the particular. From a formal logic stance, it lacks any demonstrative capacity because it relies, not on the probable, but on the plausible. The establishment of a causal relationship, a *de facto* link between the couple considered, is not as relevant as the things that can be learned when looking at each one in the light of the other.

The pairing of images has a long tradition in the history of art. Pendant paintings consist of two pictures that are compositionally and iconographically related as a pair but are not attached to each other the way hinged diptychs are. They hang or stand side by side but separately and autonomously. The term derives from the French phrase *faire pendant*, adopted to express the idea of one hanging or depending from the other, and evolved into ‘pandam’ to designate the dual nature of any disposition consisting of two fundamentally similar art pieces but different in detail, which both rely on each other to make full meaning of one another.

Meaningful arguments dealing with a dual structure of the subject matter need to address resemblance and coincidence as well as dissimilitude and divergence. Correlation is always a question of proportion: How much of ‘this’ is present in ‘that’?

The confrontation of two objects, concepts, authors or works does not necessarily imply an oppositional choice. When put into practice by exemplifying exclusionary terms, comparison might only lead to the confirmation of previous convictions and the enunciation of value judgements. Instead, we suggest that placing two things face to face can be both systematic and remain open to unexpected results. A procedure clearly related to the practice of dialogue.

Any dialogue implies two *logoi* or reasons that agree at least to discuss a disagreement. Plato took this technique to its highest level as a means to push any argumentation forward. Such a dialectical mode of thinking always implies a sense of transformation. Therefore, dialectics raises as a self-conscious process which, by confronting the consequences of the simultaneous affirmation and negation of a proposition, achieves a certain explanation for this contradiction through a synthesis. Today, even if this ‘resolutive’ approach might be questioned, we must still acknowledge one real effect of dialectics: it forces us to remain critical towards reality.

We propose to carry out a critique based on a duality that avoids the oscillatory pendulum of alternative sides as much as it avoids the need to supersede this opposition with a third term. An exercise in sheer comparison, in the midst of today’s growing complexities and multiplicities, that might lead to a deeper understanding of our discipline.

03 Conference Program

THURSDAY 25·03·2021

All schedule indicates local time Sao Paolo. Brazil (UTC/GMT -3 hours)

	09:00 - 09:30	Welcome and Presentation
Sven-Olov Wallenstein *Professor of Philosophy* *Södertörn University, Stockholm*	**09:30 - 10:30**	***Key-note speaker*** "Architecture and the Critical Project"
Break (15')	**10:30 - 10:45**	
panel #1 ***The dialectics of the case I*** ***Cathelijne Nuijsink*** *ETH Zürich. Switzerland*	**10:45 - 12:15** **10:45**	"`Disprogramming`, `Plan-less`, `Non-movement`, `No Style`: Dialectic Strategies in the Shinkenchiku Residential Design Competition (1965–2019)"
Guillermo Lockhart *Universidad Politécnica de Madrid, ETSAM, Madrid, Spain*	**11:00**	"(Post) Studio architecture: Buren VS Warhol"
Angelica Ponzio *Universidade Federal do Rio grande do Sul, Porto Alegre, Brazil* ***Andrea Machado*** *Universidade Federal do Rio grande do Su, Porto Alegre, Brazil*	**11:15**	"A Filter to the Frame – from the fenêtre en longueur to the finestra arredata"
Bárbara Salazar *Pontificia Universidad Católica de Chile, Santiago, Chile*	**11:30**	"Between a house and a museum: Redefining an emerging typology of exhibition"
Conducted by: Vanessa Grossman *TUDelft*	**11:45**	***Discussion***
Lunch time	**12:15 - 13:00**	
panel #2 ***The dialectics of the case II*** ***Suelen Camerin*** *Federal University of Rio Grande do Sul, Porto Alegre, Brazil*	**13:00 - 14:30** **13:00**	"Trust in brick: parallels between Dieste and Benítez/ Cabral"
Juan Alejandro Saldarriaga Sierra *Universidad Nacional de Colombia, Medellín, Colombia*	**13:15**	"The In-between practice. La Fragua and Previ by Germán Samper Gnecco (1958-1969)"
Carlos Eduardo Comas *Federal University of Rio Grande do Sul, Porto Alegre, Brazil*	**13:30**	"The Sesc Project: A Tale of Two Units"
Fernanda Carlovich *Columbia University, New York, EEUU*	**13:45**	"Traveling Dome. Claims and climbs over Lebanese and Brazilian domes"
Conducted by: Marina Correia *UFRJ*	**14:00**	***Discussion***
Break (15')	**14:30 - 14:45**	

panel #3	**14:45 - 16:15**	
Identity Construction (through difference) I		
Guilherme Wisnik *São Paulo State University, USP, Brazil*	**14:45**	“Being Public in Private Spaces and Vice Versa: Brazilian Art and Architecture in the Late 1960s”
Luana Cavalcante + Raquel Paulino *University of Porto, Portugal* ***Ricardo Paiva*** *Federal University of Ceará, Brazil*	**15:00**	“(Dis)continuities in the treatment of the public-private interface in social housing produced in Brazil and Portugal”
Daniela Moro *Federal University of Rio Grande do Sul, Porto Alegre, Brazil*	**15:15**	“Blurring the map: Depicting the city of Curitiba as both Spectacle and Experience”
Alice Queiroz *Universidade Estadual de Minas Gerais, Minas Gerais, Brazil* ***Eric Crevels*** *Technische Universiteit Delft, Delft, Netherlands*	**15:30**	“Urban Predation: the symbolic economy of the pixo”
Conducted by: Nelson Mota *TUDelft*	**15:45**	***Discussion***
Break (15’)	**16:15 - 16:30**	
panel #4	**16:30 – 18:00**	
Identity Construction (through difference) II		
Rafael Urano Frajndlich + Gabriel Romero + Fernando Cavichioli *Unicamp, Campinas, Brazil*	**16:30**	“The Dialectics of National and International in Oscar Niemeyer’s career: on his connections in the United States of America (1938-1947)”
Adriana Pablos *GSD Harvard, Cambridge, EEUU*	**16:45**	“Adaptation: Ubiquitous and Monofunctional Modernist Residential District”
Jale Sari *Yasar University, Turkey*	**17:00**	“From one Louvre to another: cultural constructs of the self through the other”
Jesús Utrillas Acerete *Universidad Politécnica de Madrid, Madrid, Spain*	**17:15**	“Åzone Futures Market. Insert Cåin to Start Playing”
Conducted by: Marcos Rosa *FAUUSP*	**17:30**	***Discussion***
Break (30’)	**18:00 - 18:30**	
Gareth Doherty *Director of the Master in Landscape Architecture Program, GSD, Harvard*	**18:30 - 19:30**	***Key-note speaker*** “Critical Landscapes”

FRIDAY 26·03·2021

All schedule indicates local time Sao Paolo. Brazil (UTC/GMT -3 hours)

Carmen Espegel *Full Professor Architectural Design Department and Director of the Master in Advanced Architectural Design, MPAA. ETSAM-UPM*	**09:30 - 10:30**	***Key-note speaker*** “No limits”
Break (15’)	**10:30 - 10:45**	

panel #5	**10:45 - 12:15**	
Critical Dualities (Methodologies)		
Marco Salazar *Universidad Central del Ecuador, Quito, Ecuador*	**10:45**	“Speculations on (Con)temporary Domestic Architecture: Politics, Domesticity, and the Irrelevance of Architecture in Two Rolling Projects”
Magda Mària + Silvia Musquera *Universitat Politècnica de Catalunya, Barcelona, Spain*	**11:00**	“Learning by comparing”
Gabriel Elias de Souza *Universidade Federal Rural do Rio de Janeiro, UFRRJ, Brazil*	**11:15**	“The architect’s book as self-promotion and self-production: contrasting Rem Koolhaas S, M, L, XL and Bjarke Ingel’s Yes is More”
Nikola Matevski *University of São Paulo, Brazil*	**11:30**	“Representing architecture on film. The case of Roberto Rossellini and Centre Pompidou”
Conducted by: Sergio Martín Blas *ETSAM-UPM*	**11:45**	***Discussion***
Lunch time	**12:15 - 13:00**	
panel #6	**13:00 -14:30**	
Conceptual Constructions (through difference)		
Martin Cajade *Facultad de Arquitectura, Diseño y Urbanismo, FADU Universidad de la República, Montevideo, Uruguay*	**13:00**	“USA Neighbourhood Unit vs USSR Microrayon: A Cold War battle for the ultimate urban project of the twentieth century”
Silvana Castro Nicolli *Pontificia Universidade Catolica do Rio de Janeiro, PUC-Rio, Brazil*	**13:15**	“Nature and Reversed Mimesis in Toyo Ito’s Architecture”
Sergio Motomura + Rovenir Duarte *State University of Londrina, Brazil*	**13:30**	“Decomposition of the hierarchical system: dualities in SANAA architecture”
Conducted by: Guiomar Martín *ETSAM-UPM*	**13:45**	***Discussion***
Break (30’)	**14:15 - 14:45**	
panel #7	**14:45 – 16:15**	
Extreme Dualities (A test of the methodology)		
Maria Paula Recena *Federal University of Rio Grande do Sul, Porto Alegre, Brazil*	**14:45**	“Elements of Architecture and Choreographic Objects: a new critical viewpoint”
Felipe Ferla Da Costa + Maria Paula Recena *Federal University of Rio Grande do Sul, Porto Alegre, Brazil*	**15:00**	“Eisenman e Reich: confluences and divergences between formal operations”
Peng Xue *University of Edinburgh, United Kingdom*	**15:15**	“A Radical Dual-ectics of Urban Formulation. Dashilar as a Heterotopic Partner to the Forbidden City”
Daniel Movilla + Esperanza Campaña Barquero *Umeå University, Sweden*	**15:30**	“Corset and Domestic Space: Ortho-architectural Exoskeletons in the Disciplinary Era”
Conducted by: Ignacio Senra *ETSAM-UPM*	**15:45**	***Discussion***
Break (15’)	**16:15 - 16:30**	
Tom Avermaete *Chair of the History and Theory of Urban Design ETH Zürich*	**16:30 - 17:30**	***Key-note speaker*** “Architecture ‘Talks Back’: On the (Im Possibilities of a Critical Architectural Project”

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05 Papers

In between a nomadic and a sedentary practice

The EU case. The creation of a truly nomadic practice or a territory in crisis?

Arbara, Sophia[1]; Calzado López, Rocio[2]
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2 Universidad Politécnica de Madrid (ETSAM), Madrid, Spain, rociocalzado94@gmail.com

Abstract

The present article aims through the duality of a static - nomadic distribution of space to critically reflect whether within the EU territory a paradigm shift towards a more nomadic practice has already happened and to what extent. By answering this question, a second phase focuses on proposing alternatives to how a more nomadic spatial distribution can be envisioned and spatially conceptualized.
Having introduced a model of free movement and institutional agreements, the EU becomes the most appropriate territory to explore these two concepts of sedentarism and nomadism. And while important steps had been taken to move towards a more nomadic pattern, the crises that occurred within its territory (the ongoing Covid-19 pandemic, the “refugee crisis”) have moved the EU back to an early state of sedentarism.
The fact that we returned to a sedentary distribution of space in no time during this pandemic, makes us wonder whether a nomadic arrangement existed within the EU even before. We critically approach this question and argue that for the creation of a truly nomadic practice within the European territory we need to reframe not only our political apparatuses but reconceptualize our spatial approach so far, moving beyond the established categories of borders, walls, and enclaves.
After setting the theoretical framework, we ask ourselves what would be the spatial reflection of a nomadic pattern. The Eastern European migration path and the “refugee crisis” is being used as a case study through which we envision an alternative conceptual model of flux. By redrawing the current spatial responses of containment and converting them into spaces that place the possibility of movement in the epicenter we generate spaces capable not only to adapt to any future challenges but spaces of collectivity and exchange.

Keywords: static, nomadic, EU, urban, speculative

Introduction
Embedded in the idea of the EU itself, is the free movement of its population across national and regional borders. Enhanced by the border-free Schengen agreement, more than 400 million EU citizens and non-EU legally present nationals, are (were) able to move across its territories without restrictions.[1] While the Schengen agreement was followed by the idea of moving towards a continent without borders, the establishment of a European Union implied not only the abolition of border checks along the frontiers of the member states but a whole program of initiatives, focusing on the exchange of human capital and the sharing of cultural values amongst its citizens.

Towards a nomadic Europe?
The creation of transnational free movement zones has been driving interdisciplinary attention. Scholars from contemporary philosophy to urbanism have considered Europe as the operational site to move from a sedentary relationship to space towards a nomadic one.[2] A territory where our primary relationship to space, instead of being rooted in a land ownership model and boundaries, is primarily shaped around the notion of movement and flows.[3]
This duality of a nomadic versus a sedentary distribution of space and the possibility of movement, examined thoroughly by Deleuze and Guattari[4], are the lens through which we aim to look at the EU’s experiment to redistribute its spatial pattern. Whereas in a sedentary distribution of space, movement across the land is limited between a set of boundaries and defined by starting and ending points, the nomadic distribution is instead related to any possible movement, with no predefined path as any space could potentially adapt itself to a condition of flux. And while in the sedentary model, a radical difference between who is in motion (migrants), and who is steady (non-migrants) exists, in a nomadic distribution of space, movement is potentially embedded in any act and constantly present but not necessarily visible.

A new generation of citizens
Along with the creation of a different spatial and socio-political scene for Europe, a new generation of Europeans arose. As for the last decades, European citizens have been enjoying the possibility of moving or not, without changing their citizenship status. The political agreements made it possible for EU citizens to study and work anywhere, linking city after city, without the obligation of returning to their home country. Stopping around any point of this territory became possible where no tangible boundaries seemed to exist.
This was the case before Covid-19 reshaped our daily habits and redrew strict boundaries on our territories.

Static return
In March of 2020, the European territory became the epicenter of Covid-19. Yet, in the face of the threat of the pandemic, the European Union failed to present a coordinated response. Instead, each country dealt with the virus with a national approach. Probably for the first time after the establishment of the EU´s free movement zone, terrester borders were closed, airports were shut down and European citizens residing in a different country than that of origin became migrants, unable to return home. This condition brought us back to the very origins of a sedentary model not resembling at all a nomadic distribution.

Actually, were we ever nomadic?
Today, with our physical (bound to motion) existence having almost completely shifted to a digital one (home office, online shopping, digital social encounters), the EU zone’s basic principle of free movement seems a distant concept. This unprecedented condition of crisis and the immediate national and, in most cases, the uncoordinated response amongst its members, makes us question whether a more nomadic spatial relationship existed within the EU even before Covid-19 and to what extent.
Having moved back to a sedentary distribution of space in no time during the Covid-19 crisis, we can critically reflect upon our previous stage of spatial distribution. The creation of a truly nomadic practice restructuration within the European territory requires reframing not only our political apparatuses but also our spatial approach. To do this is it necessary to move beyond the established categories of borders, walls, and enclaves.

EU’s free zone had already been tested before
Taking a step back, we observe that the cohesion of the EU along with its spatial, more nomadic distribution had been tested already before the ongoing health crisis, and relates not only to its internal border conditions but also to what lies within the EU territory and what is not part of it.

The so-called “refugee crisis” and the European response is a clear example of both a strict demarcation of what is considered EU territory as well as a case that demonstrates the fragility of a borderless union. This borderless, free movement zone of the Schengen agreement had already been questioned before Covid-19, while eight EU members, including Austria, Hungary, and Slovakia, starting from 2015, had tightened border controls, leaving thousands of migrants stranded in Italy and Greece.5
Adopting temporary solutions of emergency and camps, putting the weight on the countries of entry, and setting limitations on mobility, the absence of a collaborative response was again questioning the EU construct which rushed to present this as a problem coming from somewhere else.
In recent scholarly discourse related to the refugee influx in Europe, researchers are questioning the labeling of the latest migrant arrivals as a „refugee crisis“[5] or a „migrant crisis“, a label that is adopted by the mass media and broadly used in the political discourse. Instead, what has been debated is that the situation is considered as more of a European border crisis, a crisis of the ambiguous shared territory of Europe and its nation-states.

Movement corridors
Both COVID 19 and the crisis of migration have been two important lessons from which to learn from.
First, they have demonstrated the fragility of our spatial transnational experiment.
And second, now that we have faced a decomposition of this system, they have left us in a critical position that gives us the perspective to question our former relationship to space. The present moment is probably the most appropriate one to start reshaping our territories.

From theory to the concept; a spatial experiment
To do so in the following part we attempt to converge theory and concept by conducting spatial experimentation that aims to open up the dialogue amongst the architectural and urban discipline.
More specifically, we attempt to reconceptualize the spatial approach that the EU has held so far and rethink its spaces as places that put the possibility of movement in the epicenter; places capable to adapt to any future conditions of crises.
The experiment is based on the European geographical area of the Eastern Mediterranean path of migration. Based on the current path of forcibly displaced populations, there are two fundamental elements identified in their trajectory from the place of departure to the arrival city; *the journey and the intermediate places of staying (enclaves).*

Current conditions, journeys, and enclaves
Settling in the space of arrival is one of the biggest challenges that refugees and asylum seekers have to face. However, the way to go, the journey from the hometown to the arrival place is the most dangerous, unpredictable, and hazardous part of it. Natural and man-made hazards compose a list of threats that transform the path into a way full of obstacles; in many cases, with fatal consequences for those seeking refuge.

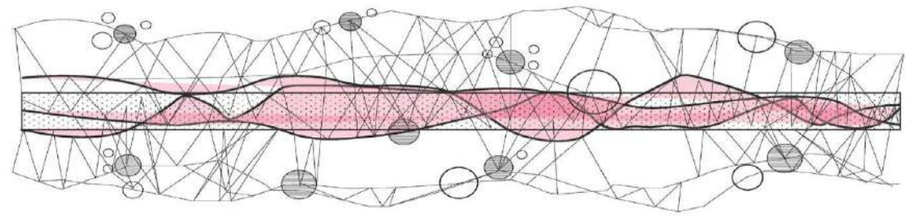

Fig. 1.


Fig. 2.

On the other hand, the intermediate places of staying, mostly camps and “hotspots” consist of poor reception capacity and seriously inadequate conditions, some sort of enclaves far from any urban environment and with no connections. In the EU, we can identify as such the territories of entry and exit: the edge conditions. The islands of Lesbos and Lampedusa, both on the periphery of Italy and Greece, became the places to handle thousands of people arriving at the gates of Europe. These landscapes of entry are perceived completely as spaces of transit, as stepping stones on the route to permanency; the sooner someone can continue, the better. Similar conditions are found on the borders, while exiting and entering another country, as consequences of the increased border controls. Eidomeni, the last village before leaving Northern Greece, is an example of an inner European border condition.
This existence of enclaves along with the impossibility of movement is the two fundamental spatial elements to alter, to move from the sedentary to a nomadic practice.

A systemic and spatial shift
The first proposition to generate this systemic and spatial shift is to look at both notions of staying - whether more permanently or temporarily - and the concept of moving, not as contradictory but as intertwined parts of a linked network of relationships and use the example of the “refugee crisis” to negotiate the existing spatial conditions. And although this does not form part of the current exploration, it is important to mention that for this paradigm shift to happen, a systemic change in the ideological and socio-political mechanisms would have to occur at the same time.

Conceptual system
Through a conceptual system, we explore the possibility of moving from enclaves to spaces of flux, from static spaces to dynamic ones, places that could place back movement as the epicenter of space distribution.
Let’s suppose that (x) m^2 is the space occupancy given to humanitarian aid organizations for the construction of enclaves. As the geographically repetitive spatial patterns of mobilities allow us to identify common routes across time, the proposal consists of a network of fluxes where a similar spatial occupancy of (x) m^2, instead of being concentrated in enclosed, isolated, systems, is distributed across an interconnected network of mobilities, creating infrastructures of reception that affect and are being affected by the environments that they interact with.


Fig. 3.1.

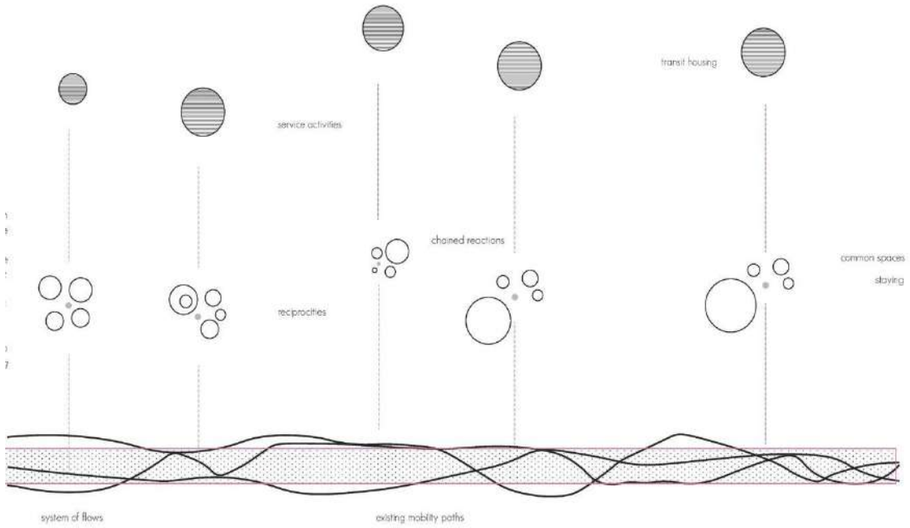


Fig. 3.2.

While the proposed model is based on existing mobility patterns, it allows populations in transit to be accommodated across the way.
A conceptual decomposition of this system would consist of three parts:
a. the system of flows/the system of mobilities
b. the actions injected structures/additions
c. reactions, the influences of the system in the preexisting spaces/context
The system of flows refers to the existing mobility routes. The actions are the injected infrastructure, the accommodation and services for populations in transit. They are recognizable in different contexts as they follow similar strategies of implementation and materiality. The reactions are the reciprocal relationships that emerge from the injected infrastructure and the way it affects and alters the existing environment. Both actions and reactions are brought together within a network of a future reopened geography.

Towards a reopened geography that places movement in the core of its morphology
The need for our territories to shift towards these open geographies becomes more fundamental if we take into consideration the historicality[6] of the phenomenon of forced displacement. This includes reminding ourselves not only that this is not an external problem to the EU, but an issue embedded in human nature, and therefore concerning all of us. Indeed, mobilities of migration appeared centuries before the existence of nation-states and transnational borders. Changing climate, landscape and inadequate food supply were amongst the first reasons to make people move across territories. By cross-referencing displacement routes over time, we realize that these routes have re-emerged across history as geographically similar paths.
Future predictions forecast that the future is not self-healing either. Forecasts of both, forced migration and pandemics claim that these global challenges will only escalate in the coming years.
There are currently 64 million forced migrants in the world fleeing wars, hunger, persecution, and a growing force: climate change. Only considering the environmental factor, UN forecasts estimate that there could be anywhere between 25 million and 1 billion environmental migrants by 2050.[7] On the other hand, according to current researchers factors such as deforestation and extinctions[8] will make pandemics a recurring phenomenon.
With pressing issues escalating in the coming years, it becomes crucial for our discipline to take a stand and start tackling global challenges with a critical eye, starting from the very fundamental principles of spatial distribution. We believe that the capacity of architects and urbanists to adopt a holistic and visionary approach makes them important contributors to this discourse.
In this paper, we present a system that turns enclaves into corridors of movement, injects infrastructures as reception facilities, envisions places where collective memory is being created amongst those in transit, and those who stay put. The theoretical framework of a nomadic/static space and the conceptual system examined here is only a first step to open up the discourse towards a practice that creates spaces able not only to respond to any conditions of crisis but capable of shaping nomadic, fluid spaces, common territories of collectivity and exchange.


Fig. 4.

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8 Gibb, Rory, et al. "Zoonotic host diversity increases in human-dominated ecosystems." Nature 584.7821 (2020): 398-402.

Image Captions

Fig. 1. A dangerous journey, Don Kitwood, Getty images
Fig. 2 Enclaves - UN camp in Turkey, AP photo/Emrah Gurel
Fig. 3.The conceptual system
Fig. 4. Image © Edith Kofsky / The Israeli Pavilion 2014

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Escola Paulista geneaology

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Abstract

In the approach of the *Escola Paulista*, the forms arise from the architectural (organizational) and engineering (structural) poles, which characterize this movement, and where art and technique are seen as two opposite and complementary aspects. Thus, this contribution displays images, schemes, and texts from which the genesis of the thought of the *Escola Paulista* that faces up to its “founder” (João Batista Vilanova Artigas) and its most prominent figure (Paulo Archias Mendes da Rocha).

Based on the book *L'Individuation à la lumière des notions de forme et d'information (1964)* by Gilbert Simondon, the intention of this work is the study of forms based on the notion of information—on the physical level—which proposes the Simondonian individuation theory, for which the mode of operation known as *transduction* is adopted for the analysis of architect’s thought based on their paradigmatic works.

The established genealogy indicates how, based on different architectural-structural—iconic elements of each author—subject to the transductive method, “it is possible to discover the dimensions according to which a problem can be defined” (Simondon, 2005) of the *Escola Paulista* and which allow its redefinition.

Keywords: Escola Paulista, Mendes da Rocha, Vilanova Artigas, Simondon, transduction.

1. Introduction: Simondonian theory and its relevance to the case studies

This paper discusses architectural works based on a hypothesis by Gilbert Simondon, in which the French philosopher states:

"…[I]ndividuation does not exhaust all pre-individual reality, and that a regime of metastability is not only maintained by the individual; but also driven by it so that the constituted individual carries with it a certainly associated load of pre-individual reality, animated by all the potentials that characterize it; individuation is relative as a change of structure in a physical system; a certain level of potential is preserved, and further individuations are still possible. This remaining pre-individual nature associated with the individual is a source of future metastable states from which new individuations may emerge."[1]

Simondon considers the notion of form is "insufficient to think about the transductive operation," for which he proposes to replace the notion of form by that of information by introducing the notion of *metastable equilibrium* for problem-solving. Also, he poses that good form is not "the simple form, the pregnant geometric form, but the *significant form*, that is, the one that establishes a transductive order within a system of reality that carries potentials" (Simondon 2009, 42).

For Simondon (2009, 36), the true invention is transductive, therefore, the being cannot possess an identity unit—that belongs to the stable state in which there are no transformations and all the potentials have been updated—but a *transductive unit* and states that, to the invention corresponds "a discovery of the dimensions according to which a problem can be defined."

The operation of *transduction* consists of "following the being in its genesis," and solve the domain problem by extracting "the resolutive structure of the very tensions of said domain." Simondon also appreciates the intuitive aspect by which the structure "appears in a domain of problematic as what contributes to the resolution of the problems posed" (Simondon 2009, 40-41).

The individuation of the technical object—that of which there is genesis—is defined by Simondon (2008, 12) as a *process of concretization* which is analyzable through the products of "human making." In the technical case, the *concretization* is the refinement of the object, that is, the resolution of operational difficulty. According to Simondon (2009, 353), to this physical individuation that studies the physical forms corresponds the *allagmatic* theory, which takes into consideration "the exchange processes between spatial configurations."

Following Simondon (2009, 49), the birth of an object that has form and matter from a plastic material such as clay—and in this case the concrete—requires a technical operation (mold) that "institutes a mediation" between matter and the notion of geometric body. In addition to the quality of plasticity, for Simondon (2009, 52), it is necessary that the matter "transmits the pressure that the worker imprints."

In this relationship between matter and form, the "common operation" called *force* "comes from an energy momentarily conveyed by matter, but extracted from a state of the total interelemental system of superior dimension, and that expresses the individuating limitations" (Simondon 2009, 53). On the architectural plane, this interelemental system is the set of structural elements that make up the architectural work, which is analyzed through the Finite Element Method (FEM) to obtain the normal stresses[2] and the modes of vibrating[3] of the structure.

The selected works that belong to the so-called *Escola Paulista* are characterized by their plurifunctionality[4], by conferring the structure an architectural character—approach that is explained from the thought of its main architects—, which makes them suitable to be analyzed from the Simondonian perspective.

The three-dimensional models that have been built, hide the potentials that are revealed by the *FEM*. Due to the complexity of the works, it is necessary to process this information based on the concept of load paths[5], which allows understanding the structural conception of the building and the "limitations" for future individuations.

In this way, it is possible to determine the efficiency of the architectural form by identifying flaws in the structure, to subsequently find solutions for its refinement, and determine whether these objects can be considered as true inventions.

2. About the architect's approach

2.1. João Batista Vilanova Artigas

In Vilanova Artigas' work, the structure is architecture, as the architect himself says: "The structure, for the architect, should not play the role of a humble skeleton, but express the grace with which the new materials allow to dominate the cosmic forms, with the elegance of larger spans, of light forms." [6]

For Artigas (2004), the generation of form is related to the mechanics of structures and points out that the tensions involved in the transition of loads between roof and foundation should not be hidden, and once materialized, they constitute the "most dignified part" of the building. According to the Spanish architect José María García del Monte (2006, 80), the buildings in Vilanova Artigas, originate from "a desire to play with equilibrium: 'tense' structures, balanced after having introduced imbalance in them."

Regarding the architecture-gravity relationship, Vilanova Artigas expresses: "I look for the value of gravity force […]. What I love is using heavy forms, getting close to the ground and, dialectically, denying them." [7]

The iconic pillars of brutalist architecture in Brazil had in Vilanova Artigas their best-known figure. The form of these elements results from an investigation of the structural behavior and the "will to transcend function through form" (Tunes and Espallargas Gimenez 2014, 59).

For Brazilian architect Borgonovi e Silva and German mathematician Toni Kotnik (2013, 1836), Vilanova Artigas "developed an architectural aesthetic that raised questions on the natural flow of gravity." They also consider that the architect managed to create new perceptions about gravitation through large and suspended volumes supported by oblique and sometimes thin structural elements, which gain importance as they transfer the weight of the building to the ground. According to the Brazilian architect Guilherme Wisnik (2004, 48), the design of the pillars is part of a "constructive morality" that seeks to express the "mechanics of construction, legible in loads and thrusts."

Another characteristic feature of Vilanova Artigas' work is the design of the ground's reaction to the building's load. Wisnik (2010, 21) perceives the emerging footings he designed as direct support of the roof without the need for "columns." This type of "columns without shaft"—where the base is in contact with the capital—appear for example in the *FAU-USP*[8].

2.2. Paulo Archías Mendes da Rocha

At the academy, Mendes da Rocha belonged to a generation of teachers who identified with the Modern Movement and especially with Le Corbusier (Motta 1967, 17). Mendes da Rocha's approach to Le Corbusier occurs from the "broad vision of architecture as a form of knowledge" held by the French-Swiss architect (Otondo 2018, 3).

As opposed to what is thought that Vilanova Artigas constitutes a reference to Mendes da Rocha, the Italian architect Daniele Pisani considers:

"It was exactly around 1956 that began, thus, to circulate in the pages of Brazilian magazines (and not only) the two projects that should be considered Mendes da Rocha's main points of reference in this phase of defining his poetics: the Museum of Modern Art of Caracas, which he still defines today as 'the best project of Oscar Niemeyer', and, above all, the Museum of Modern Art of Rio de Janeiro, by Affonso Eduardo Reidy, that other colleagues at the faculty, like Fábio Penteado and Pedro Paulo de Melo Saraiva, consider, in their own words, their main reference at that stage."[9]

In accordance with Mayol Amengual (2014, 99), a "foundational gesture" of architecture that is "to sustain a horizontal plane supported by a minimum number of supports" is present in Mendes da Rocha's work. For the Spanish architect Josep María Montaner (2014, 10-11), his programmatic drawings and paper models are true diagrams, which must be understood as "lines of forces and loads before the materialization of structural systems." Montaner claims that Mendes da Rocha's diagrams present an archetypal form—cube, cylinder, prism, frame, etc—in which matter, forces, and structures are indicated, in addition to foreseeing the program, scales, spaces and views; while the Brazilian architect Abe (2009, 61), points out that the starting point of Mendes da Rocha's architecture is the development of a "universal idea of technique and subjective knowledge."

3. Case studies

The selected architectural works that are considered as paradigmatic for the genesis of the technical object are the Itanhaém State Gymnasium (1960-61) and the House in Butantã (1964), designed by Arch. Vilanova Artigas and Arch. Mendes da Rocha respectively. These are two monolithic works built within the initial and largest production period of the *Escola Paulista*, and what links the architects is, according to Pisani (2020), “a non-epidermal trait” such as the rejection of any typological determination. Another important feature, but not a minor one in the analysis, is that the individuations occur in São Paulo and therefore the seismic loads did not condition them as they were the same for the previous works.

Both in the gymnasium and the house, the technical solutions of the structural system are determined, the constructive aspects are indicated and the structural systems are described through the dimensioning of the structural-architectural elements based on information from the original projects, necessary to solve the problem of finite elements. In the structural analysis, structural efficiency is examined to understand its refinement in subsequent works. In the case of Vilanova Artigas, it is manifested in the Anhembi Tennis Club (1961), and in the case of Mendes da Rocha, in the Museum of Contemporary Art of the University of São Paulo (1975).

First, a simplified three-dimensional model of the structural elements is built in *AutoCAD*. By exporting this model to *SAP2000*, it is possible to generate *Excel* tables that provide information about the nodes, one-dimensional elements, and two-dimensional elements.

Once the information about nodes and elements has been obtained, the thicknesses of the two-dimensional elements are entered in *MATLAB*. Linear elements, on the other hand, require the input of their area and the moment of inertia concerning their centroid.

Employing *StaBIL 3.0*, the stiffness matrix[10] is assembled according to parameters related to mechanical properties such as the Poisson coefficient (v), density (ρ), and the modulus of elasticity (E); being the latter obtained from the compressive strength of the concrete. The spectrum of the area of the municipality of São Paulo—where the buildings are located—is also required to obtain normal stress values according to seismic loads, dead loads, and live loads.

The vibration modes used for the calculation of stresses are selected from the spectrum function of São Paulo by considering the spectral acceleration of the zone. In this way, the modes of vibration that are characterized by horizontal displacements and whose fundamental period of vibration (T)—the time it takes to complete a cycle—is not less than 0.1 seconds are considered. [11]

- Itanhaém State Gymnasium:

The information of the original structural project was provided by the Brazilian architect Apoena Amaral[12], and it is noticed that two modules of resistance to the compression of the concrete were used. The module that corresponds to the roof slab is 180 kg/cm^2, while for the rest of the structure the module is 210 kg/cm^2, therefore, the modules of elasticity employed are 19,750.06 MPa and 21,332.51 MPa respectively.

The Poisson’s ratio used is 0.2, the concrete density is 0.0024 MN/m^3 and the live load is 0.001 MN/m^2 according to the construction standards *NEC-SE-CG 2014*[13] and *NEC-SE-DS 2014*[14].

The function of the spectrum of Brazil—necessary for the determination of stresses and deformations due to seismic loads—was elaborated from the map of horizontal seismic acceleration of Brazil[15] according to the “zone 0” where the building is located and the spectral acceleration is 0.025g.

- House in Butantã:

Following the 1960 Brazilian Standard[16] *ABNT NB1* in its chapter on *Calculation and Execution of Reinforced Concrete Works*, is employed the mean compressive strength of concrete of 187.5 kg/cm^2, whose modulus of elasticity is 20,157.32 MPa.

According to the standards *NEC-SE-CG 2014* and *NEC-SE-DS 2014,* the following information is considered regarding the parameters of the mechanical properties of concrete. The Poisson’s ratio used is 0.2, the concrete density is 0.0024 MN/m^3, and a live load of 0.001 MN/m^2 for the roof slab and 0.002 MN/m^2 for the first-floor slab.

As well as the Itanhaém State Gymnasium, the House in Butantã is located in the “zone 0”, so the spectral acceleration is 0.025g.

3.1. From the Itanhaém State Gymnasium to the Anhembi Tennis Club

In the gymnasium, Vilanova Artigas resorts to the frame as a structural unit, because of the need to create a diaphanous structure that shelters the architectural program. Furthermore, at the ends of the building, the structure of the frame changes to give an urban character to the structure and link it to the city.

Most of the frames are configured by three pillars, however, at the extremes—building entrances—as a consequence of an architectural decision, a larger pillar configures the penultimate frames to free the last frames from this central element (Fig. 1 top). From the modes of vibrating, it is verified how this pillar modifies—on the last two frames—both the logic of stresses distribution and the behavior of the architectural object (Fig. 1 bottom and Fig. 2 left). Also, this element when rotated acts from its greatest inertia to stiffen the structure as do the beams that brace the frames.

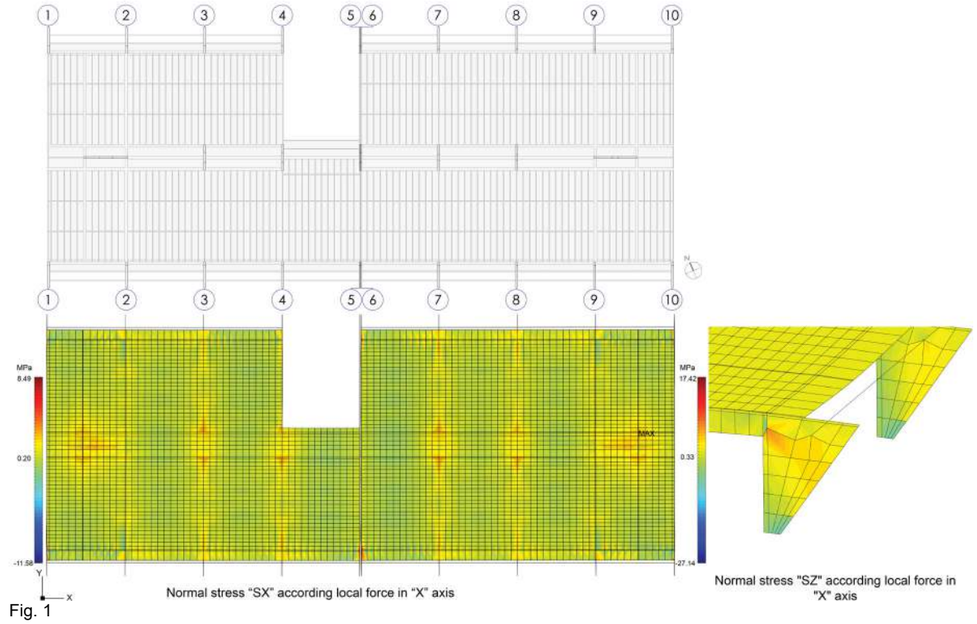


Fig. 1

Concerning the peripheral pillars, the stress distribution is not uniform, and as it approaches the outer edge of this “fin” tends to be minimal (Fig. 1 bottom). This distribution indicates that the shape of the pillar could be more effective in structural terms if loads were concentrated on a smaller regular section to contribute to the stiffness of the support. However, through this shape not only the pillar attends to architectural issues such as lighting—acting as a *brise-soleil*—but also enables stiffening the frames through gutter-beams[17].

Regarding the development of the structural form, the architect had certain knowledge on the mechanics of a reinforced concrete-framed structure, for which he divided the 24.50-meter span of the frame into two intervals and the building into two independent bodies—between axis “5” and “6” (Fig. 1 top). Although Vilanova Artigas solves problems from the shape of the peripheral pillars, these work at a lower compressive strength, whose maximum stresses reach only 56% of that capacity. Thus, it is possible to affirm that there is an exaggeration of the form in these sculptural elements.

Although no region of the pillar’s surface fails, in its encounter with the foundations there is a concentration of stresses (Fig. 1 bottom). In this way, it is noted that the pillars—as the main architectural-structural element[18]—preserve a potential that has been translated into the Anhembi Tennis Club building. Besides, it is perceived in the eighth mode of vibration—as in the sixth mode of vibration—that the roof is deformed due to torsion, so that the elements that compose it preserve potentials.

In the Anhembi Tennis Club, a three-dimensional composite form replaces the trapezoidal prisms of the gymnasium's pillars. A polyhedron—that suggests an "outcrop of the foundation"[19]—resists the load of a larger one, and from one of its faces it "sits" on the ground (Fig. 2 right), which contributes to the dispersion of stresses. The first element is of particular interest because it generates an increase in the inertial force of the pillar and gives greater rigidity to the frame. In this way, the architect was able to shift from a two-span frame to a single-span frame.

Vilanova Artigas proposes for the Anhembi Tennis Club a unidirectional bracing of the structural units and abandons the bidirectional slab used in the gymnasium. To achieve this, the moment of inertia of the bracing elements is increased using a "V" shaped beam that is also used to configure the frames. In this way, exists an architectural design of the roof by leaving free spaces to ventilate and illuminate the building (Fig. 2 right). Thus, the refinement of these elements counteracts the deformation of the roof of the gymnasium (Fig. 2 left) by optimizing the mass transported when displacing.

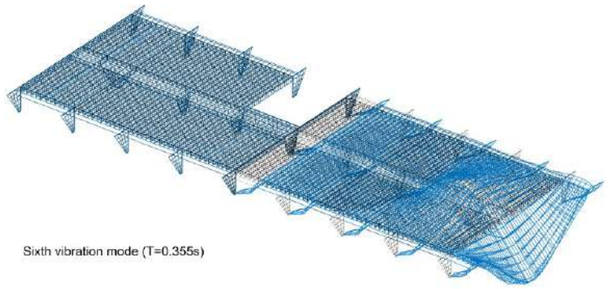




Fig. 2

3.2. From the House in Butantã to the Museum of Contemporary Art of the University of São Paulo (MAC-USP)

The use of the cantilever-frame, as a structural unit to solve the project, allows Mendes da Rocha to materialize the concept of "free plan" linked to the Modern Movement. In this typology, the moment of force that appears in the cantilever decreases the moment of force between columns. Also, the arrangement of the frames concentrates the loads in a core that encloses the rest area.[20]

The simplicity of the force calculation of an isostatic structure—as it was conceived[21]—allowed the architect to economize through delicate beams and slabs—in which the small thickness from the slabs avoids the arise of moments in the columns—, whose shape is reminiscent of "double T" precast slab.

The pair of frames—which extend vertically to create the upper floor—are braced by thin joists that extend to each side to delimit the slabs (Fig. 3 left and Fig. 3 right). Thus, since it is a monolithic structure in which all its elements work, there is no need for bracing in the opposite direction, so the uniaxial load transmission of the slab is efficient. At the perimeter of the roof slab, certain edge beams increase their height and become *empenas*—concrete plane hanging from a slab—that responds to architectural concerns such as lighting, ventilation and rainwater harvesting that converge with the structural need for bracing (Fig. 3 left and Fig. right).

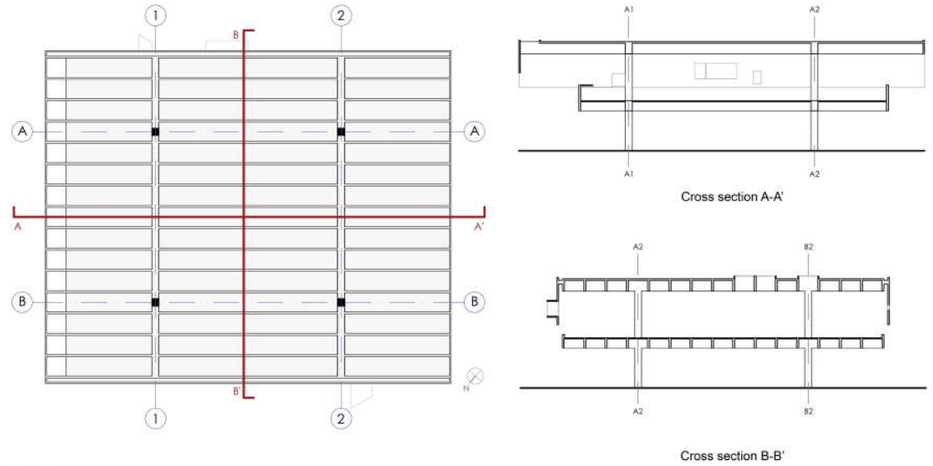


Fig. 3

According to the modal analysis, the first-floor slab and the roof slab are deformed when the structure is subject to torsion (Fig. 4 top). The structure is also prone to lateral movement and this leads to the deformation of the first-floor slab and the displacement of the *empenas* (Fig. 4 bottom).

The distribution of stresses at each level must be understood from the axis of symmetry "Y"—between axis "1" and "2." In the case of the first-floor slab, due to its asymmetrical arrangement to the columns, greater stresses arise around the "A2-B2" beam. On the other hand, the roof slab has a symmetrical arrangement, however, it is perforated by a row of skylights that lightens the slab and, therefore, reduce the stresses around the "A1-B1" beam (Fig. 5 left). In the case of the encounter between the roof slab and the *empenas*, the stress concentration in these elements is clear, although in both cases they do not exceed the compressive strength capacity of the concrete, i.e., 24% and 29% respectively.

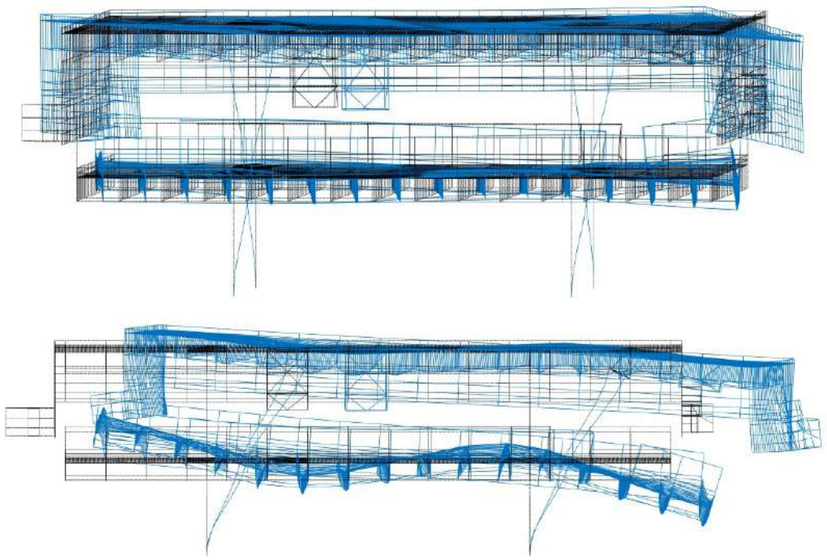


Fig. 4

Based on the process of transferring "proven solutions in housing to public works (and large scale)" identified by Pisani (2020), an analogy is drawn between the scheme of the House in Butantã and the *MAC-USP*. The *MAC-USP* (Fig. 5 right) is made up of six double cantilever frames[22]—the four beams

of the intermediate frames are transitable—, so it is used the same structural unit of the House in Butantã.

Concerning the roof slab of the *MAC-USP*, by leaving empty spaces, the stresses around the frames are reduced and light enters the building.

The *empenas* that in the House in Butantã do not meet the first-floor slab (Fig. 3 right), now in the museum are connected at their bottom edges with ribbed slabs[23] that are placed at different heights, transforming the *empena* into a wall-beam (Fig. 5 right). In this way, the weight of the ribbed slab is incorporated into the structural scheme—used so that the wall-beam does not displace as it happens with the *empenas* of the House in Butantã—and finds a new load path as it is transmitted by consoles[24] of the columns.

The concentration of stresses on the encounter of the *empenas* and the roof slab in the House in Butantã (Fig. 5 left), is refined by chamfering the corners of the enormous beams—measuring 8.30 meters deep, an inner span of 25 meters, and double cantilever of no less than 35 meters on each side[25]—of the *MAC-USP* (Fig. 5 right). According to García del Monte (2013, 18), this decision does not allude to a "marine metaphor", but to a structural criterion to "avoid local stress concentrations," so, to follow the direction of the beam cut, the wall-beam rotates.

Mendes da Rocha proposes the stiffening and lateral bracing of the museum employing the roof slab and the slabs that are located at the lower level of the beams of each frame[26] (Garcia del Monte 2013, 18). Besides, to increase the capacity of the stability of the museum, frames are proposed at each end. The decision of including these frames is understood from the modes of vibrating of the House in Butantã, in which the edge beams tend to deform due to torsion and displace due to lateral movement (Fig. 4 top and Fig. 4 bottom). To counteract this effect, pillars of greater inertia are proposed, whose section widens as they approach the ground (Fig. 5 right).

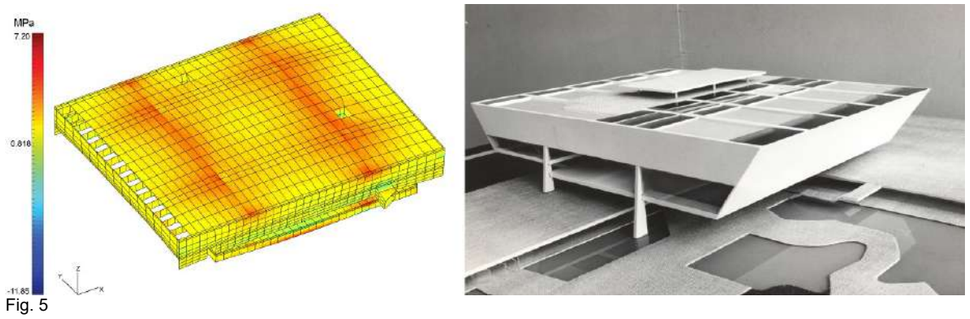


Fig. 5

4. Discussion

Once the original works of each architect have been analyzed and having examined the decisions involved in the individuation of later works, it is possible to determine the development of the architects' thinking based on the efficiency of the work as a whole. In this way, the ludic aspect found that gave rise to each individuation, allows for the identification of divergent and common traits in the attempt to redefine the *Escola Paulista*.

Vilanova Artigas creates the gymnasium from linear and two-dimensional elements, understanding that the global structural efficiency improves when performing operations such as pillar rotation to provide greater stability to the building, although he later moved away from this approach. Meanwhile, Mendes da Rocha understands the communication between elements to masterfully integrate them so that the structure works coherently, without the need to resort to three-dimensionality in specific elements to improve the structure behavior—that must be understood as global.

Although there were few projects of Vilanova Artigas whose scale is comparable to the *MAC-USP*, at the *FAU-USP* he used the *empenas* as planes that transmit its weight to three-dimensional pillars but do not intervene in the behavior of the whole structure as they are part of an independent structure that surrounds the building and that barely transmits the weight of the roof slab, thus fulfilling a compositional role in the façades.[27] Therefore, each architect effectively develops form from two-dimensional element compositions; Vilanova Artigas at local scale—pillars and beams—and Mendes da Rocha at a global scale—entire building.

This idea of "joint operation" of the elements is also revealed in Mendes da Rocha's design process, from the *maquetes de papel* as "test models"[28] that constitute a new phase of the individuation process that is usually expressed on paper. For Mendes da Rocha (2007, 27), from the paper it is referenced "what construction can be" and serves for "a verification of the codes, of the mathematics, on the moments of inertia, the foundations…" Although this artifact began to be used in the 1990s[29], structural analysis shows that Mendes da Rocha developed transductive reasoning long ago.

The *concretization* in Mendes da Rocha takes place from the association of two-dimensional elements that refine the whole structural scheme from new load paths, where simple modifications or associations between its elements, forces to devise a scheme that efficiently transmits loads to the foundations, which gives rise to a "true invention."[30] In this way, it is possible to find in Mendes da Rocha what Simondon defines as "technical imagination."[31]

On the other hand, Vilanova Artigas does not contemplate the idea of a scheme to refine the functioning, and if he does create one, it is not through the "structural game" in which instability is introduced, but quite the opposite, from the solution of architectural-structural elements such beams and pillars that allow single individuation.

Thus, according to Simondon, the work of Mendes da Rocha is a system in *metastable equilibrium* that has not dissipated all its potential energy, nor carried out all the transformations it had to give. Each successive individuation implies a new structural scheme that holds the potentials of the House in Butantã. Future individuations will be new configurations of structural elements that do not renounce their architectural character, as is the case of the "habitable" beams of the *MAC-USP*.

If it were possible to define the *Escola Paulista* from its two main figures, it can be said that there is a pedagogical value in his works, since they express how they were built and how they work as a structural system, while addressing architectural aspects. However, as a teaching method, it is Mendes da Rocha's procedure that can be truly transmitted through his vast knowledge of the mechanics of structures, and that it can now rely on the use of digital tools—like the one employed in this paper—within the design process, so it is convenient to talk about a *Escola de Paulo* rather than a *Escola Paulista.*

Notes

1 Simondon, *La individuación a la luz de las nociones de forma y de información*, 32.
"[I]ndividuación no agota toda la realidad preindividual, y que un régimen de metaestabilidad no es solamente mantenido por el individuo, sino también impulsado por él, de modo que el individuo constituido transporta consigo una cierta carga asociada de realidad preindividual, animada por todos los potenciales que la caracterizan; una individuación es relativa como un cambio de estructura en un sistema físico; un cierto nivel de potencial se conserva, y son aún posibles otras individuaciones. Esta naturaleza preindividual restante asociada al individuo es una fuente de estados metaestables futuros de donde podrán surgir nuevas individuaciones."
2 According to architect José Luis Moro, two types of stress can be caused in a structural element: "direct or normal stress" and "shear stress." In the first case the forces are applied axially, and the stress is calculated as the applied force divided by the cross-sectional area perpendicular to the direction of the load. In the second, the loads-perpendicular to its longitudinal axis-generate forces in the section parallel to the load. See Moro. *Baukonstruktion - vom Prinzip zum Detail: Band 1 Grundlagen.*
3 In accordance with Chopra, *free vibration* in a structure begins when it is disturbed from its static equilibrium position by imparting to the mass both displacement and velocity at zero time (instant in which the movement starts), and the structure is allowed to vibrate without any external dynamic excitation. He also adds that the first mode of vibration corresponds to the simplest form of excitation of a structure to become deformed, so the interest is focused on the minor modes. See Chopra. *Dynamics of structures: Theory and applications to earthquake engineering.*
4 Simondon observes in the procedure of construction of a vault, the plurifunctional character (architectural and structural) of the elements that intervene in its construction, in which, the communication of forces between elements is resolved by an architectural element such as the roof, to integrate the weight to the vault. See Simondon, *Imaginación e invención.*
5 Millais, "Loads and load paths," 30.
"This is basically a sequence of loads and reactions between structural elements. The important point here is one element's reaction to the next element's load."
6 Ferraz et al., *Vilanova Artigas*, 101.
"A estrutura, para o arquiteto, não deve desempenhar o papel de humilde esqueleto, mas exprimir a graça com que os novos materiais permitem dominar as formas cósmicas, com a elegância de vãos maiores, de formas leves."
7 Artigas, *Caminhos da arquitetura*, 225.
"Procuro o valor da força da gravidade, não pelos processos de fazer coisas fininhas, umas atrás das outras, de modo que o leve seja leve por ser leve. O que me encanta é usar formas pesadas e chegar perto da terra e, dialeticamente, negá-las."
8 Giannecchini, "Vilanova Artigas e a FAUUSP," 230.
9 Pisani, "Paulo Mendes da Rocha: a formaçao de um horizonte discursivo no inicio da carreira do arquiteto," 53.
"Foi exatamente por volta de 1956 que começaram, assim, a circular nas páginas de revistas brasileiras (e não só) os dois projetos que devem ser considerados os principais pontos de referência de Mendes da Rocha nessa fase de definição da sua poética pessoal: o Museu de Arte Moderna de Caracas, que ele costuma ainda hoje definir como 'o melhor projeto de Oscar Niemeyer', e, sobretudo, o Museu de Arte Moderna do Rio de Janeiro, de Affonso Eduardo Reidy, que outros colegas da faculdade, como Fábio Penteado e Pedro Paulo de Melo Saraiva, consideram, de própria palavra, sua principal referência naquela fase."
10 Oñate defines the stiffness matrix as the series of numbers—organized in rows and columns—that relates the displacements with the acting loads and that represents the system of linear equations that must be solved to determine an approximate solution to the differential equation. The function that is used for the solution of the matrix converts the model into a finite element that assumes the mechanical properties that have been entered. See Oñate. *Structural Analysis with the Finite Element Method Linear Statics.*
11 These periods are integrated into the São Paulo "seismic hazard curve" to determine the structure's reaction to the natural vibration of the zone that supports it, and eventually, if these periods of vibration coincide, the structure would come into resonance.
12 Apoena Amaral, E-mail message to author, March 12, 2019.
13 Ministerio de Desarrollo Urbano y Vivienda. "Apéndice. Valor de las cargas muertas y vivas." *NEC-SE-CG: Cargas (no sísmicas).* (December, 2014): 21–32. https://www.habitatyvivienda.gob.ec/wp-content/uploads/downloads/2015/02/NEC-SE-CG-Cargas-S%C3%ADsmicas.pdf.
14 ———. "Diseño a Flexo – Compresión." *NEC-SE-DS: Peligro Sísmico, diseño sísmo resistente parte 2.* (September, 2016): 43–48. https://www.habitatyvivienda.gob.ec/wp-content/uploads/downloads/2016/10/GUIA-2-HORMIGON-ARMADO.pdf.
15 Associação Brasileira de Normas Técnicas. "Projeto de estruturas resistentes a sismos – Procedimento." *Projeto 02:122.15-001.* (March, 2006): 6.
16 Associação Brasileira de Normas Técnicas. "Cálculo e Execução de Obras de Concreto Armado." *ABNT NB1.* (1960): 25.
17 "Detalhes de cobertura e piso." *Revista Acrópole* 274 (September 1961): 336. Accessed July 8, 2020. http://www.acropole.fau.usp.br/edicao/274.
18 Weber, "A linguagem da estrutura na obra de Vilanova Artigas," 64 and 68.
19 Borgonovi e Silva and Kotnik, "Confrontation between building and ground: notions of force and gravity in the work of João Vilanova Artigas," 1838.
"By raising the foundations, Vilanova Artigas creates an imaginary ground line above the original ground, and thereby contradicts the common sense that foundations must always be in the underground."
20 Mendes da Rocha, *Casa Butantã - Paulo Mendes da Rocha*, 46 and 47.
21 Ibid., 38.
"In other words, we start from a structural vision, which is isostatic, to create a hyperstatic structure. What values the resources of the dimensions in relation to the stresses capable of withstanding."
22 Damon, "Arquiteturas não construídas: modos de aproximação e representação aplicadas no MACUSP de 1975," 125.
23 Ibid., 124.
24 Ibid.
25 García del Monte, "Estructura y forma en dos artefactos discretos. Structure and Form in Two Discreete Artifacts," 17.
26 Ibid., 18.
27 Giannecchini, Óp. Cit., 227
28 Mendes da Rocha, *Maquetes de papel*, 26.
"Because models are made for testing. Everybody knows airplane model, test body, a test tunnel of a ship model. You have all seen pictures, very beautiful, of this brilliant Gaudí, who made the models with loads all hanging. This is a test model! It's something else because it's made so that you can try after being created in your mind."
29 Daniele Pisani, E-mail message to author, August 11, 2020.
30 Simondon, *El modo de existencia de los objetos técnicos*, 94.
"The invention, which is the creation of the individual, assumes in the inventor the intuitive knowledge of the technicality of the elements; the invention is fulfilled in that intermediate level between the concrete and the abstract that is the level of the schemes …'."
31 Ibid.
"We can consider the technical imagination as defined by a particular sensitivity to the technicality of the elements; this sensitivity to technicality allows the discovery of possible assemblies; the inventor does not proceed ex nihilo from the matter to which he gives a form, but from already technical elements, to which an individual being susceptible of incorporating them is discovered."

Image Captions

Fig. 1. Top. Structural plan of the Itanhaém State Gymnasium. Sc. 1/700. © Author. Bottom. Normal stresses of the Itanhaém State Gymnasium. © Author drawing from *StaBIL 3.0.*
Fig. 2. Left. General view of vibration modes of the Itanhaém State Gymnasium. © Author drawing from *StaBIL 3.0.* Right. Anhembi Tennis Club. Eduardo Ortega Studio. "Anhembi Tênis Clube." Accessed September 1, 2020. http://eduardortega.com.br/arquitetura/4d603pct2z3xa6ngfc6bl3yr394yd3. © Eduardo Ortega Studio.
Fig. 3. Left. Upper structural plan of the House in Butantã. Sc. 1/300. © Author. Right. Cross-sections of the House in Butantã. Sc. 1/300. © Author.
Fig. 4. Top. General view of the first vibration mode (T=0.629s) of the House in Butantã. © Author drawing from *StaBIL 3.0*. Bottom. General view of the third vibration mode (T=0.562s) of the House in Butantã. © Author drawing from *StaBIL 3.0*.
Fig. 5. Left. Normal stress "SX" according to local force in the "X" axis of the House in Butantã. © Author drawing from *StaBIL 3.0.* Right. General view of the MAC-USP model (Unknown photographer). Pisani, Daniele. "The life of the line. A sketch by Paulo Mendes da Rocha for the Museu de Arte Contemporânea da Universidade de São Paulo," *Revistarquis* 5, no.1 (2016): 12-28, here 16. © Paulo Mendes da Rocha by the permission of Daniele Pisani.

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Biography

Pedro Esteban Astudillo Sacoto has previously written on various topics such as the analysis that relates the design of *La Bombonera* stadium with the behavior of its fans, about the potential of basic infrastructure services in the design process, and the analysis of surface heat maps of historical periods to determine the contribution of different materials to the urban heat island effect in the city of Cuenca. He is a collaborator at *assa taller de arquitectura*—a Cuenca-based office for architecture. At this moment his particular interest is focused on the study of the philosophy of technics as a methodology to approach architecture using digital tools.

Building Stories and Writing Projects
Speculative Ecocriticism through Design

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Abstract

In “The Wilding of Mars” Alexandra Daisy Ginsberg envisions an alternative way to colonize the red planet, avoiding the countless difficulties of human adaptation in that harsh context, through the introduction of multiple vegetation species, that could sustain themselves, and even flourish, autonomously.
Is this just a method to twist the perspective on space colonization? Does it suggest a broader commentary on the commercial techno-utopian vision of Mars enthusiast entrepreneur-heroes? Does it otherwise just stand as an actual beautiful virtual landscape design project?
This paper aims to introduce the potentials that lie in the application of techniques of so-called critical and speculative design to different forms of ecocriticism.
On one hand, it is important to also outline the main background references within the vast and heterogeneous landscape of ecocriticism and environmentally oriented critical studies, which has been in the continuous progress of definition in the last decades, considering established authors like Lawrence Buell and Cheryll Glotfelty, but also more recent alternative approaches, that are less related to its origins in literary criticism, like the field of material criticism, as proposed by Serenella Iovino and Serpil Oppermann.
Then, by critically analyzing and comparing different projects of architecture, design, art, and neighboring areas that have a, more or less declared, critical vocation, several recurring elements, and patterns can emerge, allowing to draw some general methodological considerations.
This process requires, on one side, to recall and assess multiple definitions of critical and speculative design, proposed by different authors, like Anthony Dunne & Fiona Raby or Stephanie & Bruce Tharp, all of which involve the construction of scenarios, that are intentionally pushed to the fine line between reality and fiction, constantly challenging this strong yet ambiguous duality.

Keywords: Ecocriticism, Critical Design, Speculative Design, Discursive Design.

What if? Is the question at the very basis of speculative processes that encourage reflections on alternatives to current reality. When it comes to the evolution of the ecosystems of the planet and, in broader terms, “ecology” there are so many variables at stake that it is sometimes hard to distinguish fictitious provocations from scenarios constructed scientifically. In this sense, the terrain is very fertile for experiments of critical and speculative design, which utilize fiction, developed through the very disciplinary tools of design, to instigate debates on multiple relevant topics, from politics to technology or ecology, for instance.
This possibility should be considered within the broader perspective of “discursive design”, interpreted as “a means through which ideas of psychological, sociological, and ideological import are embodied in, or deliberately engendered through, artifacts” (Tharp & Tharp, 2019). Nonetheless, this paper is aimed to identify some of the potentials of the specific sub-discipline of speculative design when applied to the sphere of ecology and therefore dealing with arguments of “environmental criticism” or, as it is more often referred to, “ecocriticism”.

Who is afraid of “ecocriticism”?
Considering the peculiar situation of the planet and the widely discussed climate crisis, it is not surprising that the field of so-called “ecocriticism” is in continuous evolution. The specific definition of such discipline and its boundaries are subject to open debate.
It is worth noticing that one of its most established figures, Emeritus Professor of American Literature Lawrence Buell, who has recently defined ecocriticism as “an interdisciplinary movement committed not to anyone methodology but a particular subject: the subject of how literature and other media express environmental awareness and concern” (Fiedorczuk, 2011), has continued adjusting and expanding its notion over time.
The notorious scholar of Harvard University considers the term “ecocriticism” itself somehow “confusing” because, on one side, it still identifies too much with the first phase of the movement, related to “a particular kind of literary criticism that focused preeminently on nature writing and post-Wordsworthian nature poetry” (Fiedorczuk, 2011), whereas a lot of contemporary environmental criticism does not even relate to literature at all, and, on the other, the prefix “eco- suggests a specifically biotic or natural world emphasis, too narrow to encompass the broad range of environmental interests pursued by self-identified ecocritics, many of whom are at least as concerned with the built environment and its effects on both human and non-human life forms” (Fiedorczuk, 2011).
In this sense, various authors identify as a clear constraint the presence of a “pre-packaged conceptual container labeled *nature*", which “restricts the radical openness the ecological thought implies” (Morton, 2010).
Moreover, the role of literature itself in the development of ecocriticism has been questioned, for instance when Cheryll Glotfelty, co-founder of the main academic entity devoted to the field, the Association for the Study of Literature and Environment (ASLE), writes that “literature does not float above the material world in some aesthetic ether, but, rather, plays a part in an immensely complex global system in which energy, matter, and ideas interact” (Glotfelty, 1996).
The progressive expansion from a thinner focus on literature is crucial to understand the broader influences that the field could have, especially when considering the potential relationships between environmental criticism and design disciplines, however, its literary roots could also be considered, on the contrary, a valid point of connection with certain forms of critical design, that make explicit instrumental use of narrative, like design fiction and speculative design.

Building stories: structured critical narratives
Narrative and “stories” are also crucial points in the articulation of a particular subset of the field that Serenella Iovino refers to as “material ecocriticism”, which she defines as “the study of the way material forms (bodies, things, elements, toxic substances, chemicals, organic and inorganic matter, landscapes, and biological entities) interact with each other and with the human dimension, producing configurations of meanings and discourses that we can interpret as stories” (Iovino, 2014).
In outlining this specific materialist shade of ecocriticism, the authors argue that one of the main additions of this new paradigm to the field of ecocritical studies might be the “extension of the realm of textuality beyond the margins of canonical texts” (Iovino, 2014), further elaborating that “its particularity is that it heeds matter not solely as it appears in texts, but as a text itself” (Iovino, 2014). These ideas could also be associated with various instances of critical design, which utilizes the result of the design process as the actual medium to convey an interpretative argument.
The materialization of physical probes and/or prototypes, sometimes even described with the theatrical term “props”, is indeed also a fundamental step in some forms of speculative design, where “props function as physical synecdoche, parts representing wholes designed to prompt speculation in the viewer about the world these objects belong to” (Dunne & Raby, 2013).
This particular role of matter in a territory that is usually almost fully textual and dialogic highlights the importance within material ecocriticism of the interaction “between the human interpreter and material

textuality”, which is an aspect often recalled using Glotfelty’s metaphor of “cross-pollination” (Iovino, 2014).
On the other hand, what concerns this argument is the narrative root of this form of criticism, in line with its declared broader framework of reference, related to eminent eco-feminist thinkers like Donna Haraway, who explicitly talks about speculative fabulation and science fiction as fundamental instruments of inquiry.

Writing projects: fiction in design
This aspect might also be considered what makes it particularly in tune with the perspective of speculative design, a term that is used here in reference to the work of Anthony Dunne and Fiona Raby, whose interaction design studio unit at the Royal College of Arts in London has been, in the 1990s and early 2000s, one of the most active laboratories for development and redefinition of the field, considering the very high percentage of former students of the unit among those that are actively publishing projects and/or scholarship about it.
Various forms of design with a critical aim have appeared since the 1950s, especially concerning the legacy of Italian radical and counterculture practitioners of that time, when "events, happenings, writings, images and designs created in Italy in the period in question that set out to challenge the cult of the industrially manufactured object, which by the mid-1960s had become the norm" (Sparke, 2014), nonetheless several methodological specificities can distinguish the form of speculative design considered here as a distinct subgroup. The strategic and explicit use of fictional elements is one of its most relevant characteristics and it’s what makes it particularly suitable when evaluating its affinity with ecocritical formulations, due to the narrative approach that they require.
In this sense, also the modalities of communication and perception become crucial components of manipulation, as “the critical move is developed through a synthesis of the object and the media that records it, which provide a sequence of events that prod us to interpret its significance” (Malpass, 2017). The story that surrounds and contains the object of the speculation process constitutes what Matt Malpass labels as “context”, which “is established through media that can convey a narrative, namely photography, film, and pseudo-documentary” (Malpass, 2017).

Blurring the duality: “scientific” storytelling
A seminal example is provided by British designer Thomas Thwaites through his project “Goat Man”, through which he lived for a few days “as a goat”, together with a herd of goats, to take a “holiday” from his being human (Thwaites, 2016).


Fig. 1

When evaluating the role of the media that contribute to sustaining the narrative of this experiment, the moments of the author’s engagement with the herd of goats are the most prominent. However, what effectively builds up the critical argument might be more the documentation of the background research and its progressive discovery over time, as the author has consulted with a series of specialists in neuroscience, zoology, mechanics, etc. and experimented as much as possible in firsthand all the variables at stake.
This highlights one of the recurring characteristics of “ecocritical” speculative design projects, the inclusion of scientific or pseudoscientific research, which gives much more precision to the inquiry and, at the same time, increases the surprise effect in the overall narrative. Nevertheless, thanks to the playful and partly “satirical” nature of the project, it remains relatively free from any request of academic rigor, maintaining the role of the scientific components very agile.
In terms of its critique, it opens important questions in many directions, concerning human habits and psychology, but also the asymmetrical relationship with the environment and the coexistence with other species, among multiple other concurrent provocations.
To immerse himself in the role, rather than practicing method acting, he deployed his disciplinary design skills in developing different iterations of prosthetics for his own body, to allow him to walk and jump on a hill slope as much as possible as a goat would do. They are prototypes that can be understood as the props often highlighted by Dunne and Raby, who, in this regard, recall Kendall

Walton's theory of make-believe stating that “props are objects that prescribe imaginings and generate fictional truths” (Dunne & Raby, 2013).
The presence of make-believe props is also crucial in the project “Mitigation of Shock” by Superflux, first presented at the Centre for Contemporary Culture (CCCB) Barcelona in 2017, as an immersive installation in the show ‘After the End of the World’. The studio fabricated an entire mock apartment in a future context of extreme scarcity of resources due to climate change, developing and testing various systems for food production, from algae to mushrooms and worms growing, including software for detailed analysis of all mechanical devices through microcontrollers. Through this apartment, visitors could experience the scenario in an immersive way, without needing to rely on a certain degree of imagination.



Fig. 2

The project could be read within the perspective of environmental criticism, as it attempts to communicate in a tangible and approachable way an immense phenomenon like climate change, a “hyper-object” in Timothy Morton’s definition, making its size and complexity more relatable and specific (Jain, Ardern & Knight, 2019).
Similar to Thwaites’ one, this project is also the result of an intensive process of research and prototyping, engaging with specialist figures to inform the speculation from a technical point of view, like experts from NASA, the UK Met Office, and Forum for the Future.
Increasing the precision and accuracy of the proposal and its prototypes is also a strategy to make the projects more believable and the boundary between fiction and reality more and more blurry, breaking a strong duality that, instead of generating provocative tension, instigates, on the contrary, an often too direct and reductive reading of the project narrative.
Breaking the dualism and increasing ambiguity and uncertainty, instead, can encourage the immersion of the audience into the narrative context, making the critical argument more pungent, because it would not be perceived as something external and therefore somehow distant.
In the field of speculative design, which necessarily needs to deal with a notion of projection into the future, it becomes quite crucial to qualify more precisely different types of future, to avoid misinterpretations or vague assumptions.
In this sense a diagram that is often visualized is the so-called “cone of possibility”, where the space outside the cone accommodates whatever is technically impossible, that does not allow to construct precise frameworks of reference and is therefore hardly considered for design speculations.

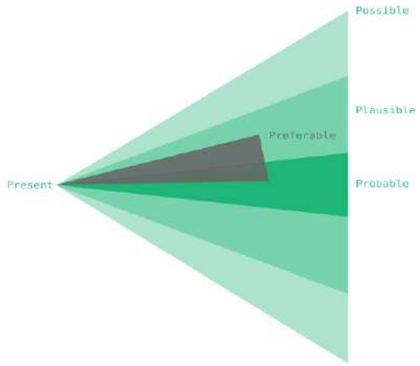
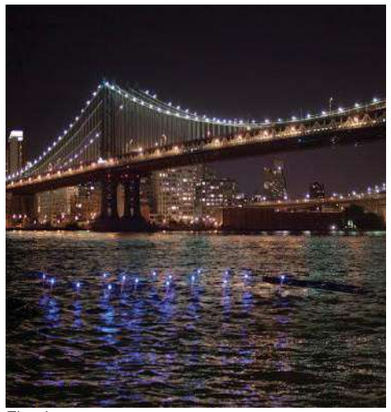


Fig. 3

Within the space of possibility, meaning inside of the cone, the very central portion represents the most probable evolution of current reality, according to its normal historical evolution, and the portion

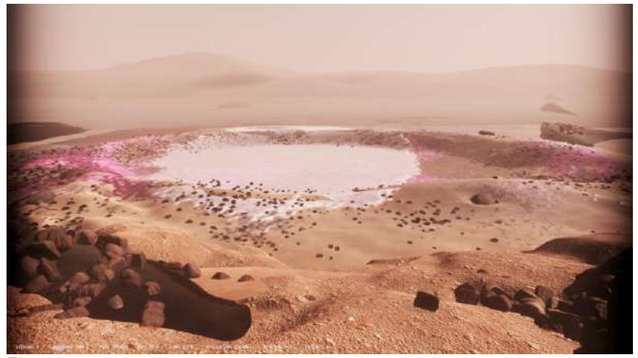
around it is labeled as the spectrum of plausibility, which is not likely to happen, but it’s highly believable and can therefore be confused with a probable future.
The realm of the plausible is ultimately where speculative narratives can find a more fertile ground to challenge the constraints of reality while indulging in the provocative ambiguity between reality and fiction.

Blurring the duality: indirect experience
The perceived credibility of a phenomenon is sometimes also increased when it is not possible to have direct contact with it, having to rely on a curated and mediated perception of it, carefully orchestrated by the designer.
This is partly the case in the project “Amphibious Architecture" by Australian artist and activist Natalie Jeremijenko, which was constituted by a series of interactive buoys floating in the Hudson River in New York, that was able to showcase, together with data relative to water quality, the presence of water creatures underneath the visitors, through a diffused system of led and micro-controllers.
Citizens were encouraged to communicate with the fish, sending them messages to better understand the state of the river water, and to feed them with special bars, balanced to metabolize the high levels of PCBs (polychlorinated biphenyls) contained in their organism. The audience could have a distant sense of the reaction of the fish but had to mainly refer to the electronic devices and their sensors, which is a form of mediated perception that we are commonly used to in our daily life and that appears therefore credible.
On the other hand, in relation to the previous argument, Jeremijenko is actually a scientist herself, determining that the technicality of the project is naturally fused with its narrative.


Fig. 4

Throughout her career, Jeremijenko has developed a large number of projects using creative prototyping and hands-on explorations that stimulate affection but are pungent at the same time, using critical design methods to communicate urban environmental concerns with a more engaged touch, as “her work promotes activism and local experiments in which social and environmental concerns are intertwined and new modes of communal living reimagined and tested” (Koch & Latham, 2017)
As Jeremijenko mentioned, regarding this project: “the idea that we eat the same stuff [as the fish] is a visceral demonstration that we live in the same system. Eating together is the most intimate form of kinship. By scripting a work where we share the same kind of food with fish, I’m scripting our interrelationship with them.” (Berger, 2006)
A mediated experience also happens when the context of speculation is distant from the audience, that has to rely on indirect reports or news, which oftentimes are not coming only from official reliable sources, that is the case, for instance, of space and other planets.
An example is the project “The Wilding of Mars” by British artist Alexandra Daisy Ginsberg, originally showcased together with various other works of different nature, as part of the exhibition “Moving to Mars”, commissioned by the Design Museum in London.
The project is a simulation of the biological development of some earthly vegetation species on Mars over a million years, without revealing any information about their origin and how they got there, but without featuring any human being. This notable absence might not be an immediate observation but is very eloquent, even if it leaves space for reflections and interpretations in the audience.
Following years of studying also about engineering plants through the Synthetic Aesthetic research project, Ginsberg “began to see the potential that biology has to challenge our ways of thinking and of consuming, conceptually if not literally” (Ginsberg et al., 2017).

Developed through a game engine simulation, the atmosphere of its speculative reality is communicated through a series of long-duration time-lapse videos that resemble pleasant landscape paintings and might communicate peaceful and positive feelings momentarily but require a certain time to give an overview.
The subtle manipulation of the fragile but powerful opportunities for fostering empathy, as the previous relationship with the endangered fish in Jeremijenko's project, might be considered another specific trait that could unite speculative design projects that have an "ecocritical" perspective and try to resist the temptation of oftentimes simplistic cynical arguments of "dystopian" narratives or of "dark ecology".
The critical attitude of the project has therefore an unusual "benevolent" tone, that is also a specific consequence of the framework that generated it. Considering the declared skepticism of the author about the whole narrative of space colonization, the curator Alex Newson suggested that the project could be critical, as long as it was also "optimistic" and "family-friendly" (Meistere, 2020), which is arguably not a common request for projects of this kind.
Eliminating humans completely from the equation, Daisy Ginsberg considers it "still a violent project", but she also explains that it pursues a "sort of uncertainty" (Meistere, 2020), and perhaps this mixture of different and even contrasting feelings and modes of understanding is what makes this project "uncanny" and therefore also really significative.


Fig. 5

Speculative ecocritical design?
In conclusion, the amorphous and debated, yet growing, field of "ecocriticism", which is more and more relevant as we progress in the global climate crisis, seems to be especially suitable for explorations through techniques of critical and speculative design. The subfield of material ecocriticism seems to have affinities with those, due to the emphasis on narrative components and their physical embodiment.
Within the specific take on speculative design outlined by Dunne & Raby, focused on the perspective of plausibility with an important role for make-believe prototyping, the selected examples share a few inspiring peculiarities that contribute to blur the duality between real and fiction. These include, on one side, the playful incorporation of scientific or pseudoscientific research, free from requirements of academic rigor, but also the subsequent increase of precision in the construction of the speculative narrative, which becomes therefore also more plausible. On the other hand, indirect modes of perception, while allowing a strategic distance, give a sense of realism by using familiar channels of communication. Nonetheless what might hold the highest potential for subtle "ecocritical" design are the mechanisms to instigate an uncertain yet empathic response in the audience, that also prevent the risk of embracing excessively negative or "dark" perspectives, which are not infrequent, considering the contemporary ecological challenges.

Image Captions
Fig. 1. Making Process of "Goat Man" by Thomas Thwaites
Fig. 2. Social Media Reactions to "Mitigation of Shock" by Superflux
Fig. 3. "Cone of Possibility", illustration from Dunne and Raby "Speculative Everything"
Fig. 4. "Amphibious Architecture" by Natalie Jeremijenko,
Fig. 5. Simulation shots from "The Wilding of Mars" by Alexandra Daisy Ginsberg

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USA Neighbourhood Unit vs USSR Microrayon

A Cold War battle for the ultimate urban project of the twentieth century

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Abstract

When Francis Fukuyama declared the "end of history" as soon as the Soviet regime imploded, he was certifying the death of the most important geopolitical duality of our times. Though this assumption could now be proved premature, we can assure that the second half of the past century witnessed the most important ideological battle in recent history, confronting socialism and capitalism in the Cold War.

The struggle between the USSR and the USA for planetary leadership was known primarily for its military and aero-spatial race. However, a more subtle enterprise was taking place in both Soviet and American homelands: the design of a spatial solution to the metropolitan expansion of their cities - a complex machine capable of materializing the ideals and values of the desired new society.

The USA deployed the "housing for the machine age" Clarence Perry had envisioned in his Neighbourhood Unit, which drove the sprawl of the American Dream using affordable mass-produced automobiles. On the Soviet side, the death of Stalin let Nikita Khrushchev return to Lenin´s era of design avant-garde and conduct a centralized solution for its housing deficit with modern architecture and planning tools: prefabricated blocks arranged in a self-sufficient district called Microrayon.

A double autopsy on these canonic urban projects will be performed to analyze how they both envisioned the future metropolis: urban form, densities, land subdivision, modes of spatial production, and resulting material landscapes will be some of the operative categories used to mine data and orient the discussion.
In this forensic immersion, we will be able to reconstruct and question two profoundly antagonistic imaginaries on the modern city while we confront the American Neighbourhood Unit and the Soviet Microrayon in their battle for the ultimate urban project of the twentieth century.

Keywords: Urban History, Urban Project, Cold War, Neighbourhood Unit, Microrayon

1. Tale of a two-world struggle



Fig. 1

Debating the urban development of the twentieth century is as fruitful as recurring. With a new historical perspective and more abundant and accessible data, it is possible to reflect on the outcome of a period characterized by a dramatic and extremely rapid spatial production of our cities and their urban conditions.

But firstly, we must define the main actors in this global scenario and target a specific time frame where the events unfolded.

In 1950 Time Magazine published a map by R.M.Chapin Jr. called “Two Worlds” focused on a divided northern hemisphere, colored in blue and red. This cartographic information was intended to map the the geopolitical battlefield where the USA and URSS disputed the ideological hegemony of the planet from the end of the Second World War until the Berlin Wall war tore down.

Besides the armed conflicts that took place in different parts of the globe, within the geographical frontiers drawn from Asia to the Caribbean, each country was pushing the boundaries in many different industrial compounds to prove the world leadership in significant areas related to human and national development.

The armament race was probably one of the most important, with the USA and USSR competing in the quantitative and qualitative sphere. Intercontinental ballistic missile capabilities, mass production of nuclear warheads, extremely powerful developments such as the Hydrogen Bomb were only a few indicators of the exponential path both countries led during the 4 decades that lasted the Cold War right after the USA ended WWII with two nuclear blasts in Japan.

In the same spirit, an equivalent situation was taking place in the aerospatial enterprise. By 1957 the USSR launched Sputnik 1 and put into orbit the first artificial satellite, and less than a lustrum later, Yuri Gagarin completed the first human voyage out in space. That same year, in 1961 the USA would launch the Apollo program that later that decade would accomplish the first moon landing.
However spectacular these races were, and besides its huge impact in the public opinion –persistently magnified by mass media coverage- other significant changes were taking place, with far more impact in the daily lives of the citizens in both countries.

Huge changes in industrial and scientific production led to a boom in electrical appliances, an abundance of consumer goods, new housing solutions, improvements in infrastructure, telecommunications, and logistics: a race was taking place within each national border. This pursuit could be associated with the production of new urban space, where both American and Soviet nations worked to achieve human development, driving along with the metropolitan expansion for almost four decades.

2. Metropolitan expansion: the spatial revolution of the XXth century

If the modern city in the XIX century was seen as a problematic environment with urgent hygienic deficits that ought to be addressed, the urban entities in the twentieth century -especially after the Second World War- were analyzed with a radically different approach. In this sense, the metropolis seized to be characterized as a by-product of modernity but understood as its core engine: a fundamental force driving social progress along with its intrinsic industrial and commercial development. This is crucial to embrace the ethos of the metropolitan expansion and understand why it increased its pace during the Cold War to become one of the most important spatial revolutions of our time.

To grasp the scale of this expansion and later characterize its material impact, we must first inspect the context and aspects that led to it.

Even though there were multiple technological and sociological shifts taking place in this period, we can measure the metropolitan expansion by inspecting two aspects of the phenomena.
First, we must mention the unprecedented exodus from rural to urban areas that took place during the Cold War. Although the Rural Flight was not a recent phenomenon, it became significant in numbers throughout the USA and USSR in this period. For instance, in the URSS urban population escalated in two decades from 32% in 1939 to 48% as Vieri Quilici points out, leading to 74% in 1989 when the last Soviet census took place. As for the US, the urban population already outnumbered rural by the 1940s, but it had its most dramatic increase between the 1940s until the 1970s escalating 17% from a vigorous 56,5% according to U.S. Census Bureau. These changes in the demographic patterns related to rural and urban settlements indicate the scale of the shifts occurring at that time.
Associated with this tendency, we must also consider the population growth in both countries. The population in the USA was approximately 140 million in 1945 and reached 240 million in 1989, were in the USSR this number escalated approximately from 170 million to 286 million in the same period, so the post-war Baby Boom and its 70% population increase, was also another common pattern between this two countries.

The question associated with this metropolitan expansion expressed both in the quantitative aspect related to the total population growth, and the qualitative one indicating the new preferences on the location of these new settlements remains crucial. How did both countries respond to this exponential demand for new housing settlements derived from the growth of their cities? Which model was used to cope with the increasing demand for more domestic square meters?

Before exploring the solutions, we have to consider the last set of data comparing Soviet and American urban expansion. According to Roberto Segre, between 1950 and 1970, 150 million people received a housing solution from the Soviet state, so considering an average of 2.85 members per home in 1979 more than 50 million new homes were produced. As for the United States, in the same decades, the increase in housing units was roughly 22.5 million. The urban and spatial arrangements for this new housing infrastructure will have radically different approaches in both countries.

The USA deployed the Neighbourhood Unit, an idea derived from the English Garden City movement that led to the rise of Suburbia, and the USSR´s Microrayon as an organic and decentralized strategy to expand the socialist state.[1]

3. The Housing for a Machine Age: The Neighborhood Unit

The arrival and relocation of war veterans after the Second World War, the baby boom that took place afterward, and the continuous migration from the countryside that had been persistent in the previous decades, were the crucial variables that drove the metropolitan expansion and the booming of the housing industry during the Cold War years in the USA. The urban model that carried out this transformation was a continuation of a process that started in the nineteenth century.

Several authors[2] aim at Ebenezer Howard´s Garden City movement as the idea behind the origin of the Neighborhood Unit. Howard´s proposal, which combined the benefits of the rural environment with the amenities and services provided by the urban settlements, evolved in the United States with the appearance of the automobile throughout the garden suburbs at the dawn of the XXth century. Forest Hills Gardens became one of the first neighborhoods created in this spirit just outside Manhattan in New York, a place where the mortality rate of infants caused by automobile accidents was alarming. And precisely in Forest Hills Garden, Clarence Perry discovered the principles of his Neighborhood Unit proposal according to Peter Hall.

Perry presented this idea for the first time to the “American Sociological Association” and the “National Community Center Association” in Washington DC on December 16th, 1923. His theory was based on six key points that combined, would define the urban layout of the Neighborhood Unit. The first aspect was related to the overall size of the urban development, defining its perimeter by putting an elementary school in the center of the urban tissue and establishing a maximum walking distance between the houses and the geographic center. This would at the same time define the unit demographically, establishing the school population and consequently the total number of inhabitants. The second point would describe its limits. Once the perimeter was established, it would canalize all heavy traffic for it not interfere with the daily life in the interior of the units securing its school-attending residents. The following aspects defined by Perry located specific land uses and services inside the unit, such as green public spaces (at a maximum distance of 400 meters), community services (school and community centers) in the barycenter of the geometric composition, and commercial buildings in the perimeter, preferably in the junction of the mobility arteries. Finally, he specified the layout of the interior streets which should be narrow and organic, meandering the landscape as to discourage the intromission of cars cutting across the Neighborhood Unit.

This urban layout was decisive in building the housing boom that started to sprawl in the metropolitan areas of American cities. For instance, in 1950, 57% of its residents were located in the central areas of the Metropolitan Statistical Areas (MSA) decreasing to 43% in 1970, or 45.9% in the suburban expansion, receiving new 19 million inhabitants[3]. The material expression of this urban expansion and relocation used the garden suburb layout as a design basis but changed it dramatically. This ongoing expansion of the outskirts of cities that had stopped right after the Great Depression, had its comeback once the world conflict ended: the massification of the automobile made it possible to decentralize the urban tissue along highways and motorized paths, and freed the urban model from its dependence of the city centers and historical urban cores.

But despite the important shift in this regional expansion, most of the features present in Perry´s model were maintained and therefore defined one of the most important urban reconfigurations of the past century: detached single-family homes in suburban plots surrounded by highways with malls in its corners and civic and educational services in the middle of the neighborhood.

Spatial production of the American Suburbia, as seen from above in satellite images proves how this model was massively extended across the country to be a distinctive character of the metropolitan expansion during and after the Cold War decades.



Fig. 2.

4. Apartments for the proletariat: The Microrayon Solution

The context and history that led to the post-war massive housing production in the URSS had things in common with the American counterpart but was also drastically different. The first thing that should be taken into account was the destruction of inhabitable areas in several cities during the armed conflict period, which downscaled the national average square meter per inhabitant from 6.45 in 1923 to 3.18 in 1950 according to Roberto Segre. This reduction in more than 50% of the available housing area has to be understood in the middle of massive migration from rural to urban areas, in a large scale process that drove an agrarian-based country to an industrial superpower that started in the Lenin era: the urban population was roughly 18% in 1913, only a few years before the October Revolution occurred, to roughly half the county´s population in 1959.

In that context Nikita Khrushchev, who was First Secretary of the Communist Party of the Soviet Union since 1953, delivered his “Industrialized Building Speech” in December 1954 in the “National Conference of Builders, Architects, Workers in the Construction Materials and Manufacture of Construction and Roads Machinery Industries, and Employees of Design and Research and Development Organisations”. This declaration would trigger the most important housing production enterprise –or revolution- of the twentieth century.

Before addressing the specific production of Khrushchev´s aspirations, it is important to remind that the results of the process had important landmarks in the pre-Stalin architecture decades, with bonds that link the avant-garde Soviet movement in the 20s and 30s with European counterparts, sharing not only the events organized by the Modern Movement, but a common spirit towards the overall modernization in architecture and urban spheres, and especially housing. The Narkomfin building by the OSA group, which started its construction in 1928 or Nikolaev´s Communal House of The Textile Institute from 1929, were radical examples of residential architecture during that period. But apart from the celebrated modern architecture masterpieces, Dom-Kommuna projects and the overall collective housing approaches were rehearsing what many CIAM exponents of the European rationalist movement were only theorizing, driving not only a genuine interest but also active participation of several of its members. This interest was expressed in the proposals for the reconstruction of Moscow 1931/1932, where Le Corbusier, Wright, Ernst May, and Hannes Meyer, among others, delivered proposals for the soviet city. However radical and forward-thinking these proposals were, the traditional city-oriented strategies led to a plan that preserved the existing urban tissue and superimposed an urban mobility layout made from concentric and radial traces. But this plan led by Vladimir Semenov in 1935, would nonetheless incorporate a few aspects that defined the urban strategy in future decades: the division of the city in Rayoni (units defined demographically, housing 100.000 Muscovites) and Microrayoni (ranging from 5.000 to 15.000 inhabitants), this last unit composed by Superblocks (Kvartal), the fundamental unit of collective life hosting its main building programs.

This was the beginning of a drastic transformation of residential building layouts: the proletariat way of life, and its consistent material environment, that would encourage participation and collectivization of community life, was being developed. However, Stalin era architecture and planning focused on monumentalism and the city-block residential tissue production, freeze this forward-thinking approach and it was only later recovered after the war, maintaining some aspects of Semenov´s principles for Moscow, extending them to other Soviet cities: the city as a unitary tectonic and social organism, the

definition of normalized architecture and urban projects and the Superblock as the basic urban planning unit.

In this postwar context, a specific experience would define the fate of the housing revolution. In the Southeastern outskirts of Moscow Nathan Osterman, leading a group of architects built the 9th Quarter of Cheryomushki built between 1956 and 1958: an experimental district that functioned as a laboratory of building technologies to test the optimal housing block that would be repeated all over the USSR. This catalog of construction techniques and building typologies would deliver the architecture unit replicated all over the country: the Khrushchevka, also known as the K-7 prototype. This 5-storey prefabricated structural wall apartment block housed 1, 2, and 3 dormitories variants in 30, 44, and 60 sqm. In the following decades, the K series would admit some other variants both in height and construction techniques. The urban layout organizing the Kruschevka was the Microrayon, continuing the guidelines of the Moscow plan and finally delivering the urban formula for the soviet metropolitan expansion: micro districts of 10.000 inhabitants organized in uniform standardized housing blocks, with educational public facilities in the center in a green surrounding that function as a leisure open space within the unit, whose perimeter was circumscribed by mobility arteries locating other public buildings related to transport, work, and commerce.

As a result, the total amount of square meters of housing produced almost doubled from 240 million (1951-1955) to 474 million (1956-1960), and the prefabricated technology used escalated from 25% in 1950 to 70/80% in 1958. This was de beginning of a national scale industrial complex to deliver prefabricated housing attacking two main aspects. One economic, reducing the costs per square meter both in material resources and delivery schedules, the other one aesthetic, overcoming the monumental historicism of the Stalin era, proposing a new material landscape for the proletariat.[4]



Fig. 3

5. Dissecting urban models in 8 layers

In the following chapter, we will inspect two paradigmatic cases for each of the urban solutions: Maryvale Village in Phoenix Arizona, USA, and Rusanivka in Kiev Ukraine, former USSR, both generic urban productions of its time. The first is a suburban expansion of detached single-family automobile-dependent homes; and the second one, a green island with scattered multi-storey apartment blocks accessible by public transport. They work together as perfect examples of the urban principles developed in each context.

Size and limits

The overall size for each of the urban fragments studied -both flanked by defined transport routes in their perimeter- is 256 hectares for Maryvale and 101 for Rusanivka. Regarding its inhabitants, the previous ratio is inverted and escalates from a total number of 11000 in Phoenix to almost 50000 in Kiev, with a population density that multiplies by more than ten times in comparison from 43.5 to approximately 488 inhabitants per hectare.

The urban fabric and spatial form

The formal aspect of the built environment is also radically different. While the American counterpart is defined by organically disperse small objects, in an almost uniform relation between open and constructed space, the soviet model relies on vast open greenery with parallel pieces, equally positioned to create a rigid and abstract urban tissue. The size and form of these objects are also radically different: while in Maryville ground-scrapping multiform masses spread through the field, in Rusanivka the defined rectangular shapes escalate in height more than three or four times is rival. The distances between these pieces also define the model, stressing a continuous organic form in one case, and a definite set of rules separating the constructions in the other.

Mobility model

According to the street layout on each urban piece, it is possible to read the mobility model. The suburban neighborhood in Phoenix relies strongly on the private automobile, and therefore extends its routes to irrigate every building in the area, with speedways in the outer border. In the soviet counterpart, few streets invade the greenery as the whole system relies on public transport, based on nodes, defined arteries, and free-flowing pedestrian paths to connect the city and the housing units.

Property and land subdivision

Land subdivision and its limits between private and public property may be one of the most diverting features between the two cases. In Rusanivka we find almost no limit in the vast open space containing the buildings. The frontier is the architecture itself, allowing every passer-by to navigate the urban unit freely. In Maryvale the outcome is frankly opposed: privately owned land circumscribe public navigation in the open space to streets and parking lots. And even if this part of the private property may be somehow accessible, the limit is both symbolically and perceptibly clear with fences, garden features, signs, or pavement transformation; whereas it could be inferred collective State-owned buildings in Kiev.

Architectural typologies

Regarding the characteristics of the architectural types, we have no shades of grey in between. On one hand, we have geometrically repeated collective and standardized multi-storey apartment blocks with 60 square meters per home, while on the other organically arranged single-storey pitched-roof detached houses able to expand their area to 300 square meters on average.

Construction Techniques

Along with the overall strategies and typological approach came specific construction techniques to deliver each housing solution, and even though technicians from both sides fantasied and experimented with a post-war approach that could finally industrialize the building processes, the Soviet housing solution would accomplish this goal on a larger scale with the K-series apartments. The US solution was diverse and somehow eclectic, experimenting from large scale machinery initiative to smaller, DIY kits, ballon-frame wooden structures, etc...

Education buildings

One common aspect in both solutions –and basically one of the distinctive vignettes of the model- was the location of kinder gardens and schools in the very center of the urban piece, as if this particular equipment was to be the most important, preserved first with a defensive mass transport limit and afterward a dense housing belt. Sports lawns and distinctive buildings were both found, but again in the Soviet solution, this was within and surrounded by the green open space whereas the other would

appear as an enclave intermittently seen from the pedestrian environment, usually mirrored by another institution to ensure some freedom of choice regarding the institutional profile.

Public and representational space

Finally, let's describe the public scenery. In Rusanivka almost everything is public space with few commercial buildings close to its limits, whereas nature, sometimes idyllic or bucolic, or even untamed, invades the exterior of the residential buildings until they almost disappear. Nature in Maryvale is privately owned through artificialized, organized, and controlled gardens and barbecue lawns. The public and representational space is therefore not the park or the old suburban civic center, but the mall: this showcase of consumer good turned into a meeting point for social life.

1. Land ocupation and mobility layout in Maryvale, Phoenix Arizona - USA



2. Land ocupation and mobility layout in Rusanivka, Kiev - Ukraine (former USSR)



	Maryvale	Rusanivka
Overall Size (hectares)	256	101
Non Residential Area (hectares)	57.1	88
Residential Area (hectares)	198.9	13
Housing Units (per hectare)	16	140
Total Housing Units	3200	14000
Total Inhabitants	11100	49300
Density Housing Units (per hectare)	12.4	139.4
Density Inhabitants (per hectare)	43.5	488.0
Domestic area (hectares)	97.46	84.50
Domestic area per Inhabitant	87.5	17.1
Average area per Housing Unit (sqm)	300	60
Private Space in Aerial View	0.9	0.14
Public Space in Aerial View	0.1	0.86
Occupied space ratio in Aerial View	0.42	0.14
Built space in relation to Total Area	0.49	0.93

Fig. 4

The calculations associated with each case shown above are a mere approximation derived from measures and calculations from aerial imagery and street view spatial data available, creating a model for each built environment. Along with this physical approach, generic population density data in the case of the US and an average square meter involved in the housing solutions for the USSR were used. They express, therefore, an estimated result useful to compare these cases.

6. Space production as a materialized ideology

If the city can be considered the ultimate material expression of any given society, and its residential function to be the most relevant within the urban tissue, the model designing these residential areas embodies the social and cultural values of that society. Moreover, and viewed from a historical perspective, the post-war decades of the last century are among the most significant periods in terms of growth and development of urban areas. Therefore, it is still crucial to study the aftermath of the urban models that represented each exponent on a global scale: the Neighborhood Unit in the case of the USA, and the Microrayon for the USSR.

It may be reasonable to infer that the battle for global leadership was also disputed through urban production as it had been in the armament and aerospatial sphere. Construction and its associated urban development are crucial production engines to explain economic growth and human development. Diving into the overall balance expressed in the previous chapters, the URSS –as has been noted- surpassed the USA in the total number of houses produced, but it is critical to stress that the amount of square meters of its metropolitan sprawl inverts this relation. As a result, even though the total number of houses produced during those decades by the USA was lower, the total number of square meters may have had an important economic impact compared to the USSR. Moreover, the decentralized and private construction-management approach could have also benefited the economy in substantial terms, making it more fluid and dynamic. As Robert Fishman mentions in “The Rise and Fall of Suburbia”, the suburban production –dependent in a way of the centralized city- gives birth from 1950 to what he calls the “Technoburb”: a liquefied and dislocated strategy of occupation on a regional scale rather than a metropolitan one that upgraded the previous model to a new level. This may in part be the background for the geopolitical success of the American enterprise by the end of the century, as the Soviet model somehow froze and became static, dependent in a way on the centralized city.



Fig. 5

But the impact also permeates, is driven and feeds back the cultural production, building a landscape that triggers several other processes within the society that go beyond the material production itself: once urban models become part of the popular culture, they define aspirational and identity values to become symbols that transcend the material struggle to an ideological sphere, the final stage of this battle for the urban project of the twentieth century.

Notes

1 Most of the demographic data for the URSS was checked with the document “Households in Russia and the Soviet Union, 1900-2000: Size, Structure and Composition” by Afontsev, S.; Kessler, G.C.; Markevich, Andrei; Tiazhel'nikova, V.; Valetov, T., Internal Migration and the Flight from the Land in the USSR, 1939-1959 by Karl-Eugen Wadekin.
2 Peter Hall, Francoise Choay, Lewis Mumford as well as the publications made by Michael Mehaffy, Nicholas Patricios, James Karl Dunaway, Jason Brody.
3 Data extracted from “The Causes of Metropolitan Suburbanization” by Peter Mieszkowski and Edwin S. Mills and Peter Hall in his “Cities of Tomorrow. An intellectual History of Urban Planning and Design in the Twentieth Century”.
4 Data from “Reconstruction plan of Moscow 1935 as an urbanistic concept” an academic essay by Elena Bulanova and “A Clash Of Bricks, Blocks & Panels: The Timeline Of Soviet Mass Housing Construction. “Dmitry Goncharuk for Strelka Magazine.

Image Captions

Fig. 1. Left. Two Worlds 1950 by Robert M. Chapin, published in Time Magazine, January 2, 1950. Right. Castle Romeo mushroom cloud, National Nuclear Security Administration - Nevada Site Office Photo Library.
Fig. 2. Google Aerial imagery (left) and StreetView captures (right) of Maryvale, Phoenix-Arizona in the USA.
Fig. 3. Google Aerial imagery (left) and StreetView captures (right) of Rusanivka, Kiev-Ukraine, former USSR.
Fig. 4. Table of compared data between Maryvale and Rusanivka.
Fig. 5. Left. Levittown 1947 television advertisement (Ira H. Gallen Video Resources). Right. Capture of Cheriomushki, the Soviet musical film directed by Herbert Rappaport in 1962.

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Trust in brick:
parallels between Eladio Dieste and Gabinete de Arquitectura

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Abstract

The paper proposes a comparative analysis between the architectural production of the Paraguayan office Gabinete de Arquitectura, currently coordinated by Solano Benítez (Asuncion, Paraguay, 1963) and Gloria Cabral (São Paulo, Brazil, 1982), and the seminal work of Uruguayan engineer Eladio Dieste (Artigas, Uruguay, 1917-2000).

Dieste made his reputation as an exceptional brick handler by building self-supporting shells in reinforced brick masonry and curved walls of undeniable plastic strength. The production of Benítez and Cabral has attracted the attention of the specialized critic in the last years due to the extensive and unusual use of the brick, in operations involving experimentation, pre-fabrication, and reuse of building materials.

This study aims to make an approach to the compositional procedures, method of work, and structural behavior of the architectural elements designed by the Paraguayan firm compared to the modus operandi and the achievements of the Uruguayan engineer. The analysis relies on the production of Dieste, in Uruguay and Brazil, between the 1950s and 1980s, and the works of Benítez and Cabral, developed in Paraguay, between the 1990s and the beginning of 2010s. In order to compose the scope of the reflection, the paper breaks the unity of each building and highlights its component elements. Thus, the comparative analysis is divided between vertical closing elements - curved or pleated walls -, horizontal - flat, vaulted or folded roofs - and voided surfaces. Once fragmented, the projects begin to intertwine through similarities of thought and strategies of composition. More than pointing out differences and similarities between these two practices, this paper aims to contribute to the construction of the hypothesis that the current architectural production in Latin America, more than questioning postmodern positions and affirming the pertinence and vitality of the modern tradition, still expand the repertoire of elements and compositional procedures of its predecessors.

Keywords: brick, modern architecture, Eladio Dieste, Solano Benítez, Gloria Cabral

1. Introduction

The paper proposes a comparative analysis between the architectural production of the Paraguayan office Gabinete de Arquitectura, currently coordinated by Solano Benítez (Asuncion, Paraguay, 1963) and Gloria Cabral (São Paulo, Brazil, 1982), and the seminal work of Uruguayan engineer Eladio Dieste (Artigas, Uruguay, 1917). Dieste made his reputation as an exceptional brick handler by building self-supporting shells in reinforced brick masonry and curved walls of undeniable plastic strength. In Dieste and Montañez, a construction company he established in partnership with engineer Eugênio Montañez in 1954, Dieste explored reinforced masonry, his great contribution to brick architecture. Through complex structural calculations, inserting steel meshes between the ceramic blocks, Dieste made it possible for the masonry to resist tensile stresses - which until then had not happened, since masonry was only used when subjected exclusively to compression efforts. The production of Benítez and Cabral has attracted the attention of the specialized critic in the last years[1] due to the extensive and unusual use of the brick, in operations involving experimentation, pre-fabrication, and reuse of building materials.

It is precisely the expressive forms achieved with the use of bricks that place the production of Benítez and Cabral in constant comparison with the Dieste's work - in addition to the geographical proximity between both productions. Interviews in which Benítez is questioned about the possible influence of the Uruguayan precursor in the work of Gabinete de Arquitectura are not uncommon. Despite the profound knowledge he demonstrates about Dieste's production, Benítez (Arquitectura Viva 2014) claims to have had no direct contact with the Uruguayan engineer, except through his constructed work. Bearing in mind that Dieste's work is a precursor and referential and that it has been internationally disseminated for a long time, this study aims to highlight this debate by making a comparative reflection between the two productions.

This paper proposes an approach to the compositional procedures, method of work and structural behavior of the architectural elements designed by the Paraguayan firm compared to the modus operandi and the achievements of the Uruguayan engineer. More than pointing out differences and similarities between these two architectural productions, this paper intends to analyze and reflect on the persistence of the modern disciplinary tradition in works developed in Latin America since the 1990s. Instead of limiting itself to raising and discussing the hypothesis of continuity between the practice of Benítez/Cabral and Dieste's, the study assumes that the current architectural production in Latin America drank from the source of modern designs and buildings from the 1930s to the 1960s. Besides, more than pointing out differences and similarities between these two practices, this paper aims to contribute to the construction of the hypothesis that the generation of architects to which Benítez and Cabral belong, more than questioning postmodern positions and affirming the pertinence and vitality of the modern tradition, still expand the repertoire of elements and compositional procedures of its predecessors.

It should also be emphasized that this study goes against several publications regarding the production of Benítez and Cabral in the last years, which suggests that the Paraguayan practice makes use of the ceramic brick to evoke regional components. Associations of the work of the Paraguayan office with the terms "local" and "regional" are very common. Magazines such as the Spanish *Arquitectura Viva* and the English *The Architectural Review* published buildings designed by Gabinete de Arquitectura in numbers entitled "Local Knowledge" or "Local Materials", for example.[2] It is a superficial association, which tends to classify what is not European or North American as "regional", often considered as exotic to foreign eyes. This relationship is due, in large part, to the symbolism surrounding the use of brick, rather than to the fact that it is from a certain place on the planet. Brick is a familiar material, whose manufacturing and handling techniques are widely disseminated and dominated worldwide and which has a strong symbolic connection with the earth - the color of the brick reflects the soil of the place where it was extracted - and with the man - its measurements are anthropometric (one foot by one foot) and it fits in the palm of a man's hand. Different from the type of association of the brick with regional components, this study transcends the visual and symbolic aspects and assumes that the brick, for Benítez and Cabral, is not the end, but the means capable of putting into practice their architectural propositions.[3]

The analysis relies on the production of Dieste, in Uruguay and Brazil, between the 1950s and 1980s, and the works of Benítez and Cabral, developed in Paraguay, between the 1990s and the beginning of 2010s. In order to compose the scope of the reflection, the paper breaks the unity of each building and highlights its component elements. Thus, the comparative analysis will be divided between vertical closing elements - curved or pleated walls (Fig. 1) -, horizontal - flat, vaulted, or folded roofs (Fig. 2) - and voided surfaces (Fig. 3). Once fragmented, the projects begin to intertwine through similarities of thought and strategies of composition. Such compositional elements are extracted from representative work of Dieste and Benítez/Cabral, all of them built, some of which are already mischaracterized. Among Dieste's vast body of work, the selection includes the Christ Obrero Church (1958-1960), in Atlántida, the San Pedro Church (1969-71), in Durazno, the Salto Municipal Bus Terminal (1973-74), and the Montevideo Shopping Center (1984-85), in Uruguay, and the CEASA Market (1969-72), in Porto Alegre, Brazil. The selection of Benítez and Cabral includes the Center for Retired Banking

Employees of Paraguay (1995-96), in Asunción, the Unilever Paraguay Headquarters (2000-01), in Vila Elisa, the Esmeraldina House (2002-03) and Abu & Font House (2004 -06), in Asunción, Las Anitas House (2006-08), in Choré, and the Teletón Children's Rehabilitation Center (2008-10), in Lambaré, Paraguay. From the selected buildings it is possible to extract elements of architecture capable of satisfactorily feeding the comparative analysis between the productions of the two firms, so that it can be done accurately, in order to adequately achieve the purposes of this study.

2. Vertical elements: curved or plated walls

The relationship between geometry and structural resistance of architectural elements is recurrent in the productions of Dieste and Benítez/Cabral. Bending or folding vertical or horizontal surfaces allows slender walls and corrugated or folded roofs made with a ceramic brick. The stability of these elements, especially the curved and folded walls, is mainly based on their geometric configurations, as stated by Heino Engel (2003, 212):

"While in the horizontal structural surfaces the bearing capacity under gravitational load decreases with the increase of the surface (slab mechanism), in the vertical structural surfaces the bearing capacity increases with the expansion of the surface (plate mechanism). By tilting the surface in the direction of the acting force, through a curve or bend, it is possible to reconcile the opposition between horizontal efficiency, in space coverage, and vertical efficiency, in resistance to gravitational forces."[4]

In his first architectural work, the Cristo Obrero Church (1958-1960), in Atlántida, Dieste designed walls and roofs as double-curved shells in ceramic bricks. The nave's sidewalls are 7m high and 30cm thick and are designed as a sequence of conoids that start from a straight line close to the ground and end in a wavy shape - "with a parabola and two half parabolas shaped by a wave" (Comas, 2001) - in the upper portion. At the highest level of the walls, they find the roof, on a flat overhang that protrudes beyond the external vertical surfaces.

More than twenty years after designing the Cristo Obrero Church, and with a significant amount of works built in the curriculum, Dieste combined wavy walls and double-curved vaults at the Montevideo Shopping Center (1984-85) - a pavilion of more than 100,000m² in the central region of the Uruguayan capital, which the engineer developed in partnership with the architect Gómez Plater-López Rey.[5] As the ground where the mall sits has a considerable gap, the entrances happen in two distinct levels. Just like in the church of Atlántida, the walls of the pavilion are composed of a succession of conoids that start from a straight line and end in waves - the difference is that, in this case, the wavy portion is close to the ground and the straight portion, on the higher. When the building is two stories high from the street, this geometric shape is horizontally mirrored.

In the work of Gabinete de Arquitectura, the undulations are replaced by folds, both on the façades and interiors of buildings, in elements that work as a brise soleil, closing or dividing room. These pleated walls are made up of a combination of rectangular, triangular, or trapezoidal plates made with shiner bricks[6]. In the renovation project for the Center for Retired Banking Employees of Paraguay (1995-96), in Asunción, pleated walls appeared as a solution to cover the entire length of the three floors of the façade facing the building's internal courtyard. It was built from pre-molded rectangular brick plates, positioned so that they appeared to be rotated on the vertical axis, offset from each other. Currently, after the building has undergone several renovations, it's no longer possible to see Benítez's intervention.[7] The façade designed by Benítez was originally composed of three levels of pleated plans, each corresponding to a floor of the main body of the building. The folds on each level, in addition to being slanted, were alternated with those on the other floors, which created a range of textures, from the small to the large element - brick, prefabricated board, pleats on the pleated wall. In the project for the Unilever Paraguay Headquarters (2000-01), in Villa Elisa, the zigzag wall is inside, delimiting the corridor that connects the workstation area to the multipurpose room. The pleated plane is also composed of three levels of rectangular pleats, but in this case, each of them occupies only one-third of the floor height.

On the façade of the Esmeraldina House (2002-03), in Asunción, the pleated skin that makes the interface between the house and the street is made up of precast brick panels and has three floors height. The folds that form this surface, composed by the union of two 4cm-thick trapezoids - the size of brick laid shiner -, were positioned alternately, so that in one fold the largest opening is above and the next, below - a type of arrangement known as "contrasting folds". In some cases, the folds are suppressed and it is possible to see parts of the main volume of the house from the street.

Las Anitas House (2006-08), in San Estanislao, has a pleated plan of opposite folds that separates the access corridor to the bedrooms from the façade of the house. Only the lower portion of the wall can be seen from the outside, through a low horizontal opening. The pleats of this wall are composed of a pair of triangles made of concrete and shattered solid brick. This zigzag plane is 11cm thick and 5m high and was cast in place on wooden formwork.

Benítez and Cabral also designed pleated walls for the external closure of the hydrotherapy building at the Teletón Children's Rehabilitation Center (2008-10), in Lambaré. The zigzag plans shape the four façades of the high portion of the opaque volume that houses the pyramid-shaped roof and also make

the interface of the changing rooms with the outside. The pleats, composed by the union of two rectangles of narrow and high proportion, were cast in place on wooden formwork with shiner brick.



Fig. 1

3. Horizontal elements: flat, vaulted, or folded roofs

The thin-shell structures for roofs play an important role in Dieste's professional career. Throughout his more than fifty years of work, the Uruguayan engineer designed and calculated a series of curved and folded elements in reinforced ceramics to overcome large spans and cover ground-floor buildings with programs consistent with this typology - factories, churches, gymnasiums, warehouses, bus stations, shopping malls, and markets.

The church in Atlántida is covered by continuous double-curved vaults that overcome an average span of 16m and rest on the flat overhang above the wavy sidewalls. The roof is made with brick, cement, and sand mortar and prestressed steel reinforcing bars, covered by a layer of thin and light ceramic plates. At the pavilions of the CEASA Market (1969-72), in Porto Alegre, the use of reinforced ceramic shells spreads and diversifies. In addition to the curved vaults, barrel vaults and flat slabs are used according to the need for free spans and natural lighting inside the spaces. Double-curved vaults with sheds, supported on pillars of a laminar section, cover the Producer's Pavilion - the first and last vaults in the sequence differ from the rest of the set by their higher ending. The Portico and the Merchants' Pavilions are covered by barrel vaults - a sequence of 11 modules of 5m x 25m, in the first case; 21 modules of 5m x 30m, in the second. Both covers are supported by central structural elements, relieving the larger sides to receive not load-bearing enclosures.[8]

At the San Pedro Church (1969-71), in Durazno, the nave's roof and walls are folded plates in reinforced masonry, an unprecedented procedure in Dieste's career. Built to replace the roof of the neo-Romanesque church destroyed by fire, the pleated roof overcomes the 30m span between the existing narthex and the new presbytery without any kind of intermediate support. Small metal pillars join the folded planes of the walls of the main nave and the roof of the side aisles to the triangular section ceiling that covers the central span of the assembly. This gap between the pleated surfaces lets in a sliver of light that bathes the brick surfaces and highlights their unusual geometries.

Finally, still regarding the roofs with barrel vaults supported by central pillars[9], there is the project for the Salto Municipal Bus Terminal (1973-74), a collaboration between Dieste and Nestor Minutti. The building is a sequence of 7 barrel vaults in prestressed reinforced masonry supported by a single line of concrete pillars, 12m over, hanging on each side, finished by an edge slab, in turn, supported by a thin beam that rests in kind of corbels connected to the pillars at the ends of the roof.

There are at least two types of roofing in Benítez and Cabral projects: the slabs, usually flat or slightly curved, in reinforced masonry or concrete, which can be solid, coffered or hollow-core; and vaulted roofs, which section is usually an arch that moves in only one direction. The brick is omnipresent: on the flat slabs, it is shattered to cover the base of the wooden molds that shape the concrete; in the hollow-core slabs, it plays the role of the structurally unnecessary core; and, finally, on coffered slabs or curved roofs, it appears in pre-molded triangular elements that fulfill the role of permanent formwork for reinforced concrete, like a Roman *opus testaceum*[10].

Among the flat roofs, it is worth mentioning the one that covers the living room at the Abu & Font House (2004-06), that of the Las Anitas House, and those from the renovation of the Teletón Children's Rehabilitation Center. They are thin slabs of reinforced masonry made with titled bricks -

the one from Abu & Font is slightly concave and has a span of about 8m by 20m - in order to reduce the final thickness of the structural element and save material. Regarding the folded roofs, there are the inverted pyramids in reinforced masonry supported by concrete pillars that cover the Teletón hydrotherapy block. In contrast to the previous cases, in this pyramid roof, the bricks were laid shiner and arranged with stack bonds.
At the Teletón Center, Benítez and Cabral also designed three vaulted roofs, two external and one internal. The external ones - one that covers the ramp for wheelchair users that overcomes the gap between the sidewalk and the access to the building and the other that shadows the glass facade of the reception and one of the front gardens - are composed of pre-fabricated triangular elements of bricks, joined by concrete and steel, and overcomes spans of around 12m and 10m, respectively. The third shell is inside the physical therapy block and was built with concrete and pieces of a brick cast in place on wooden molds - the thickness is about 5cm, the span is more than 7m, and the extension is approximately 20m. In all these cases, the shells are reinforced and have an asymmetrical section - the catenary curve does not even complete at one end. Both roofs load directly on the foundations at one end and on pillars or beams at the other.

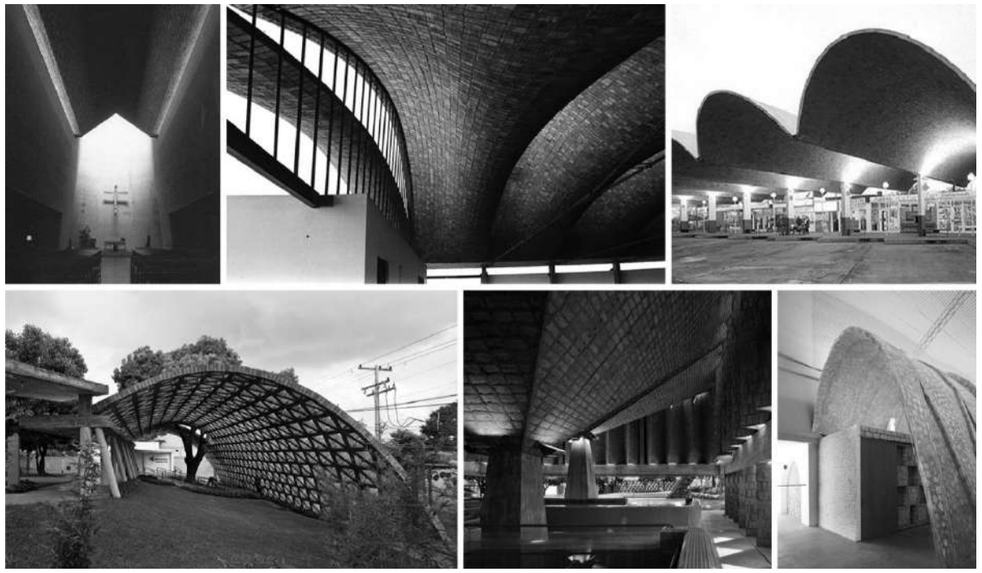


Fig. 2

4. Voided surfaces
Unlike ceramic *cobogós*, in which the grid is made with pieces manufactured for this purpose, in the Dieste and Benítez/Cabral projects, the elements of the voided surfaces are made with the brick itself. In some cases, the opening grain is given only by the size of the brick, convenient for this purpose; in others, the grain is a result of the combination of bricks in elements of different geometries, usually prefabricated on the construction site. In addition to controlling visual permeability, the use of voided surfaces reduces the incidence of sunlight and manages the natural light that strikes the interior spaces. Furthermore, in many Dieste and Benítez/Cabral projects, this plastic operation highlights the innumerable possibilities for brick.
At the Cristo Obrero Church, in Atlántida, the light enters through small perforations in the wavy side walls and in the vault just above the altar. It also penetrates through the narrow opening between the choir and the set of the roof and corrugated walls, or through the wall of inclined panels behind the choir, whose guardrail is a lacy surface made of bricks. At the San Pedro Church, in Durazno, two bricks work on lancet windows bathe with light the interior of the building. Above the church's narthex, on the nave's rear inner wall, Dieste placed five concentric ceramic rings, of irregular hexagonal shape, joined by thin steel rods, in a kind of rose window that filters the light that falls on the existing front facade. A similar phenomenon occurs above the presbytery when the walls rise in height to let in light through a kind of hexagonal-shaped clerestory window made of bricks.
The voided surfaces stand out in Dieste's production when it comes to reservoir towers, bells, and communication equipment. In these cases, the suppression of ceramic elements makes even more evident the fine grain of the handmade work of bricks bonding. The water towers of Las Vegas Resort (1966), in Canelones, of Refrescos del Norte (1979), in Salto, and the TV tower in Maldonado (1985-86), preceded by the belfry of the church in Atlántida, are examples of this kind of operation. They are

cones or truncated cones, which vary between 15m high (in the church of Atlántida) and 60m high (in the TV tower), consisting of thin perforated ceramic walls (those of the Tower of Salto do not even reach 15cm in thickness), which support heavy water bodies (the Canelones tower holds about 120 thousand liters). Perforations are not just plastic operations but have at least one important practical function in minimizing the impact of winds on the structural system of the towers.
Regarding the use of voided surfaces possibly the Unilever Paraguay Headquarters and the Teletón Children's Rehabilitation Center are the most emblematic buildings designed by Benítez and Cabral. A large ceramic lattice covers the two longitudinal façades of the Unilever building. This lattice, built with prefabricated brick modules, protects the meeting room and workspace from excessive sunlight. These modules were placed one by one on a narrow reinforced concrete slab connected to the existing structure. At the Teletón Center, the light on the access and the front gardens is filtered by two voided vaulted structures composed of prefabricated brick triangles, set on wooden molds and joined by concrete. The cover that protects the ramp for wheelchair users can be seen from the access road to the Foundation and is the main identifying element of the institution. The other is set over a garden and shadows the glass facade of the reception. Both are more transparent than opaque, so they do not block the view, but help to filter the solar incidence.
The voided surfaces are also in the Abu & Font House, in a wall that separates the access ramp to the second floor from the living space on the ground floor. This wall is a backdrop for the living area and also a railing for the side of the ramp. Although it effectively functions as protection, the ramp, and the living room are still visually connected through the transparency guaranteed by the prefabricated brick lozenge. In their recent projects, Benítez and Cabral also used the voided elements in slabs, beams, and pillars. The customary prefabricated brick triangles started to function as permanent formworks for cast-in-place reinforced concrete, helping to shape lattice beams and coffered slabs. This is the case of the Quincho Tia Coral (2014-15) and the new FADA-UNA classroom building (2014-2019).

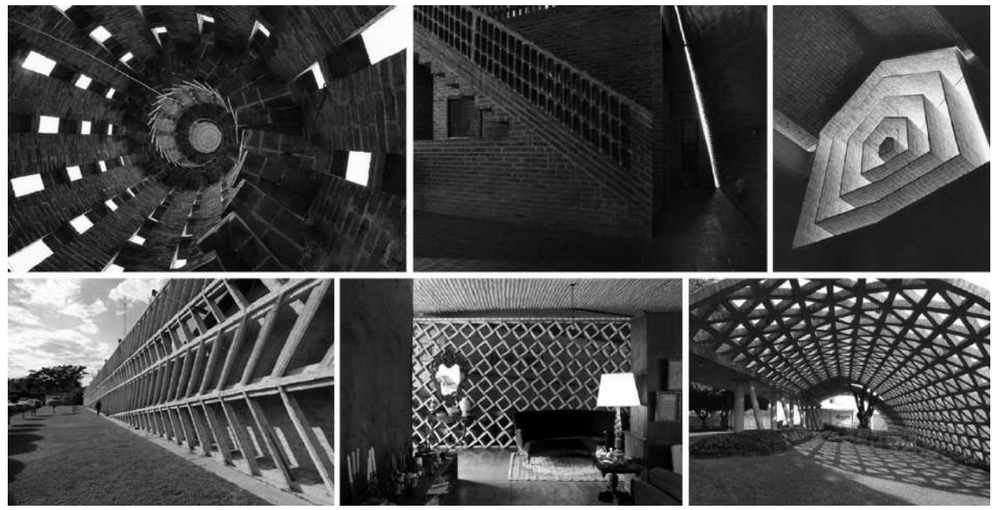


Fig. 3

5. Parallels
The relevance of the legacy that Dieste left for generations of architects who succeeded him is undeniable, especially regarding the relationship between geometry and material resistance when using ceramic bricks. In Benítez and Cabral's work, the extensive use of folded and curved walls and roofs makes clear the intention to achieve the rigidity of structural systems by shape, in an effort to overcome construction limitations of brick and optimize material resources. However, although they are similar in terms of the role of brick in compositional operations and complex and unusual structural systems, the productions of Dieste and Benítez/Cabral differ mainly in terms of the typologies of buildings, geometric procedures, and structural calculation methodology.
Most parts of the work developed by Dieste throughout his professional career are made up of pavilions for factories, warehouses, churches, gymnasiums and other programs consistent with the large spans overcame by the reinforced ceramic roofs that he designed and calculated. The same cannot be said for the production of Benítez and Cabral, which includes institutional and residential programs that reach up to four floors, due to the combination of the construction potentials of different materials. While Dieste concentrated his efforts on the use of reinforced masonry in self-supporting shells, Benítez and Cabral make extensive use of reinforced concrete, leaving the role of permanent formwork to the brick. In some buildings designed by Gabinete de Arquitectura, the brick is used as a

simple veneer masonry for reinforced concrete structures; in others, it is used as a complement to these structures, acting as a light aggregate, as permanent formwork, or helping to resist compression efforts; and in a few other works, the brick is structural and used in load-bearing walls.

Dieste developed a semi-empirical constructive system that “adopts laminar geometries without tympanum and of catenary directrix, in contrast to the known formula of classical laminar theory, surfaces of circular, elliptical or cycloidal directrix, with tympanum at their ends” (Comas, Canez and Bohrer 2004, 123). In this way, with the prestressing of the mortar that covers the bricks, Dieste was able to reduce the thickness of the shells without worrying about limits other than constructive ones and the risk of buckling. On the other hand, the structures developed by Benítez and Cabral behave like bars, that is, they are similarly requested in the two dimensions of the cross-section and little requested in relation to the length (as well as beams, pillars, grids, and porticos, for example), unlike Dieste's laminar structures, which have extensive surfaces compared to their thickness.

In addition, according to Benítez (Arquitectura Viva 2014), in Paraguay, there was not the manpower, the rigor of calculation, and the certified material that Eladio Dieste had in the works he developed in Uruguay and in Brazil. In fact, regarding the architectural and structural design processes, while the Uruguayan engineer based his drawings on sophisticated calculation procedures and used materials with previously verified characteristics, Benítez and Cabral base their production on 1:1 prototypes made with common brick without proven resistance.

“A frequent question I listen is how much of Mr. Dieste is in our work, and I believe that in fact Mr. Dieste produced his brick, so he knew how it broke and how it worked and how it was, had a basis of calculations that we didn't have yet, and there was a third element that was amazing workmanship. The mason who is capable of placing a wavy, titled and the uneven wall had to be at NASA. We didn't have that manpower, we didn’t have the rigor of calculation and we didn't have the material certification. So we started with the inertia of the material to see how we could increase this inertia, how we could design it so that anyone who had supination, pronation, rotation, and the translation would be able to build without the specialization of a bricklayer from Dieste. And finally, to take advantage of this material condition of ours, where the brick was precisely “under suspicion” to transform it into another element, to transform it into a kind of lost formwork.”[11] (Arquitectura Viva 2014)

In terms of composition, the architectural elements developed by Dieste and Benítez/Cabral - curved or pleated walls, vaulted or folded roofs, and voided surfaces - are even more dissonant. While Dieste preferred the double-curved wavy walls with brick laid in loco in stretcher bond, Benítez and Cabral preferred the folded walls made with rectangular, triangular, or trapezoidal panels prefabricated with shiner brick. Dieste's curved planes are load-bearing; the pleated plates of Benítez and Cabral are external veneer masonry for reinforced concrete structures or non-structural walls to divide internal spaces. The most part of Dieste's roofs are self-supporting shells in reinforced ceramic with double-curved vaults or barrel vaults; those of Benítez and Cabral are, in most cases, flat, solid or coffered slabs, in reinforced concrete with ceramic brick as permanent formwork. When these roofing structures are curved, in vaults of voided elements, they function as bars and not shells. Still, while Benítez and Cabral prefer to filter the light with uniform grids composed of small prefabricated brick elements, Dieste chose the large opaque ceramic planes that let the light in through small perforations or narrow openings.

Another important point of dialogue between the two productions is the texture of the surfaces, obtained by the way the brick is laid and how the joints are made. While Dieste uses the full-sized stretcher or shiner brick, Benítez and Cabral often tilt it, break it in half or smash it, laid with flushed joints or even with generous joints of protruding mortar. Despite the roughness conferred by the naturally porous texture of the ceramic brick, Dieste's surfaces denote regularity and uniformity, which are opposed to the uncanny feeling caused by the extremely rough surfaces or by the more unusual and diverse handling that Benítez and Cabral make of this same material.

Benítez studied architecture in the 1980s, the decade of the “crisis of modern architecture”. The “postmodern condition” also reached Latin America, although later in comparison to Europe and North America. While in some countries such as Brazil and Chile the 1980s represented a period of a positive review of the modern movement by specialized critics, in Paraguay, on the contrary, the modern architecture, which was already sparsely represented, gave way to the postmodern style of *neos*, imported materials, pediments, and ornaments. For architects who graduated in Paraguay, the modern reference came much more from foreign productions than from works built within the country. Although it is possible to point out Dieste as one of the references to the work of Benítez and Cabral, probably the main similarity between the two productions lies in the confidence placed in the possibilities of the ceramic brick and in the desire to break the technical limitations of this material, taking from it its "under suspicion" status and giving it the possibility to shape plastically expressive architectural elements in which he does not usually appear. The dialogue between the Uruguayan engineer’s production and the Paraguayan office is established much more by material similarity, through the extensive use of brick in unusual geometric operations, than by affinities in terms of compositional procedures, calculation, and construction methods or structural behavior of the elements of architecture they designed. The generation of architects to which Benítez belongs – the one who graduated in the 1980s, in Latin America – questioned the postmodern positions and affirmed the pertinence and vitality of the modern tradition. Although the construction elements placed here side by side are structurally and competitively distinct, the agenda is modern. The production of Benítez and Cabral is affiliated with the postures and lineages of the first generations of modern architects, taking the modern as language, using elements of modernist grammar, and still expanding the repertoire of elements and compositional procedures and of its predecessors.



Fig. 4

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Notes

1 The Gabinete de Arquitectura was a finalist for the Mies van der Rohe award for Latin America in 2000, Benítez won the first Swiss Award in 2008, and, already in Cabral's company, was awarded the Golden Lion for the best participant of the 15th Venice Biennale in 2016.

2 *Arquitectura Viva*, Local Material, Madrid, no. 151, 2013; *Arquitectura Viva*, Local Knowledge, Madrid, no. 161, 2014; and *The Architectural Review*, London, no. 1420, 2015.

3 For more information, see: Camerin, Suelen. *O tijolo em Solano Benítez*. Mestrado em Arquitetura. Universidade Federal do Rio Grande do Sul. Programa de Pesquisa e Pós-Graduação em Arquitetura, 2016; Camerin, Suelen. "Além do tijolo em Solano Benítez". V Docomomo Sul O moderno no contemporâneo: herança e prática (Porto Alegre), 2016; and Camerin, Suelen. "O estranho tijolo de Solano Benítez". IV ENANPARQ (Porto Alegre), 2016.

4 "Enquanto nas superfícies estruturais horizontais a capacidade portante sob carga gravitacional diminui com o aumento da superfície (mecanismo de laje), nas superfícies estruturais verticais a capacidade portante aumenta com a expansão da superfície (mecanismo de placa). Por meio de inclinação da superfície na direção da força atuante, através de curva ou dobra, é possível conciliar a oposição entre uma eficiência horizontal, na cobertura do espaço, e eficiência vertical, na resistência às forças gravitacionais." Quote taken from - Engel, Heino. *Sistemas Estruturais.* Barcelona: Editorial Gustavo Gili, 2003, 212. – and translated by the author.

5 Dieste had already used the combination of wavy walls and double-curved vaulted roofs in the 1960s at the Church of N. Sra. de Lourdes (1965-68), in Malvín, Montevideo, Uruguay, and then went back to doing this type of operation in the 1990s, at the Church of San Juan de Ávila (1993-96), in Madrid, Spain, in collaboration with Spanish architects Carlos Clemente and Juan de Dios de la Hoz.

6 Shiner is a brick laid on the long narrow side with the broad face of the brick exposed, also called rowlock stretcher.

7 For more information on the current state of conservation of the building of the Center for Retired Banking Employees of Paraguay (1995-96), see the photos available at: Camerin, Suelen. *O tijolo em Solano Benítez*. Mestrado em Arquitetura. Universidade Federal do Rio Grande do Sul. Programa de Pesquisa e Pós-Graduação em Arquitetura, 2016, 106-109.

8 The design team of CEASA Market (1969-72), in Porto Alegre, was coordinated by Brazilian architects Cláudio Araújo and Carlos Maximiliano Fayet, and also included architects Carlos Eduardo Comas and Luis Américo Gaudenzi. For detailed information regarding the competition, the final project and construction process of the CEASA Market, see: Comas, Carlos Eduardo Dias; Canez, Ana Paula; Bohrer, Glênio Vianna. *Arquiteturas Cisplatinas: Roman Fresnedo Siri e Eladio Dieste em Porto Alegre*. Porto Alegre: UniRitter Editora, 2004.

9 For technical information and schematic drawings regarding the self-supporting vaults construction system designed by Eladio Dieste, see: Torrecillas, Antonio Jimenez. Eladio *Dieste 1943-1996.* Sevilha: Junta de Andaluzia, 1997, 89.

10 For more information about roman opus testaceum and the work of Benítez, see: Camerin, Suelen. "Solano Benítez: new uses for old brick." *71st Annual International Conference of Society of Architectural Historians*, Saint Paul, Minnesota. 2018.

11 "Una pregunta frecuente es cuánto del Sr. Dieste está en nuestro trabajo, y creo que, en realidad, el Sr. Dieste producía su ladrillo, así sabía a cuánto se rompía, cómo funcionaba y de que manera estaba, tenía una base de cálculo nosotros no teníamos tampoco, y había un tercer elemento que era una mano de obra asombrosa. El albañil que es capaz de poner una pared ondulada, inclinada y desplumada tenía que estar en la NASA. No teníamos la mano de obra, no teníamos el rigor de cálculo y no teníamos la certificación matérica. Entonces empezamos con la inercia del material para ver cómo podríamos levantar esta inercia, cómo podríamos diseñar para que cualquiera que tuviera supinación, pronación, rotación y traslación pudiera construir sin la especificidad de un albañil de Dieste. Y finalmente, aprovechar esta condición matérica nuestra, donde el ladrillo estaba precisamente "bajo sospecha" para convertirlo en otro elemento, para convertirlo en una especie de encofrado perdido." Quote taken from the video - Arquitectura Viva. "The Architect is Present – Solano Benítez", 2014, video, 1:41:22, https://vimeo.com/95963788 - and translated by the author.

Image Captions

Fig. 1. Curved walls and pleated plates. Above: Cristo Obrero Church (1955-60), Atlántida, and Montevideo Shopping Center (1984-85). Photos: Gonzalo Viramonte and SMA FADU Udelar. Below: Center for Retired Banking Employees of Paraguay (1995-96), Unilever Paraguay Headquarters (2000-01), Villa Elisa, Esmeraldina House (2002-03), Asunción, Las Anitas House (2006-08) and Teletón Children's Rehabilitation Center (2008-10), Lambaré. Photos: Gabinete de Arquitectura Archive, Leonardo Finotti and Suelen Camerin.

Fig. 2. Flat, domed and folded roofs. Above: San Pedro Church (1969-71), Durazno, CEASA Market (1969-72), Porto Alegre and Salto Bus Station (1973-74). Photos: Yoshihiro Asada/a+u, SMA FADU Udelar and Vicente del Amo. Below: Teletón Children's Rehabilitation Center (2008-10), Lambaré. Photos: Suelen Camerin and Leonardo Finotti.

Fig. 3. Voided surfaces. Above: Cristo Obrero Church (1955-60), Atlántida, San Pedro Church (1969-71), Durazno. Photos: Gonzalo Viramonte and Yoshihiro Asada/a+u. Below: Unilever Paraguay Headquarters (2000-01), Villa Elisa, Abu & Font House (2004-06), Asunción, and Teletón Children's Rehabilitation Center (2008-10), Lambaré. Photos: Enrico Cano, Leonardo Finotti and Suelen Camerin.

Fig. 4. Construction sites. Above: TEM Factory SA (1958-62), Montevideo, and Cristo Obrero Church (1955-60), Atlántida. Photos: SMA FADU Udelar. Below: Unilever Paraguay Headquarters (2000-01), Villa Elisa, Esmeraldina House (2002-03), Asunción and Teletón Children's Rehabilitation Center (2008-10), Lambaré. Photos: Gabinete de Arquitectura Archive.

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Traveling Dome
Claims and climbs over Lebanese and Brazilian domes

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Abstract

Traveling Dome starts with the image of a woman walking over a concrete dome. Alia Farid's work for the 32nd Sao Paulo Art Biennial was recorded on the Tripoli Fairgrounds. Those watching the video on the occasion of the Biennial have experienced the feeling of an estranged familiarity, for the dome in Tripoli is in direct tension with an important form of the Brazilian architecture imaginary—one that not by accident also appears instantiated right outside the same Biennial pavilion.
Farid's video returns to Brazil a form that traveled to Lebanon in 1962 with Oscar Niemeyer. The spaces created by these domes are endowed with an uncanniness from their form—a horizontal dialogue that arises from architecture and surpasses it. The dome's travel can be read as a symptomatic episode of the post-war developmentalist agenda in the Global South. From an analysis of the domes in Sao Paulo and Tripoli, this paper understands *travel* as the repetition of a formal solution and its mediatic dissemination. Hence, Niemeyer's domes are interconnected by ideas of progress, modernity, nation-building, and suspension. While in Brazil, the promise of democracy with Brasília in 1960 was postponed by the 1964 Military Coup, in Lebanon, the national sovereignty represented by the Fairgrounds was interrupted by the 1975 Civil War.
This unsettling nexus of development, politics, conflict, and geometry, has led to multiple re-programming of Niemeyer's domes. The domes have been claimed and climbed upon. Climbing the dome is an act of transgression by itself. Transgression of architectural typology, since it shifts cover to the floor, and transgression of use, as it changes the utility of the buildings. The linear future sought by the design of these projects is displaced by multiple futures of social appropriation that physically and politically re-signify the traveling dome on the ground.

Keywords: development, modernism, Ibirapuera Park, Tripoli Fairgrounds, Oscar Niemeyer

1. Introduction

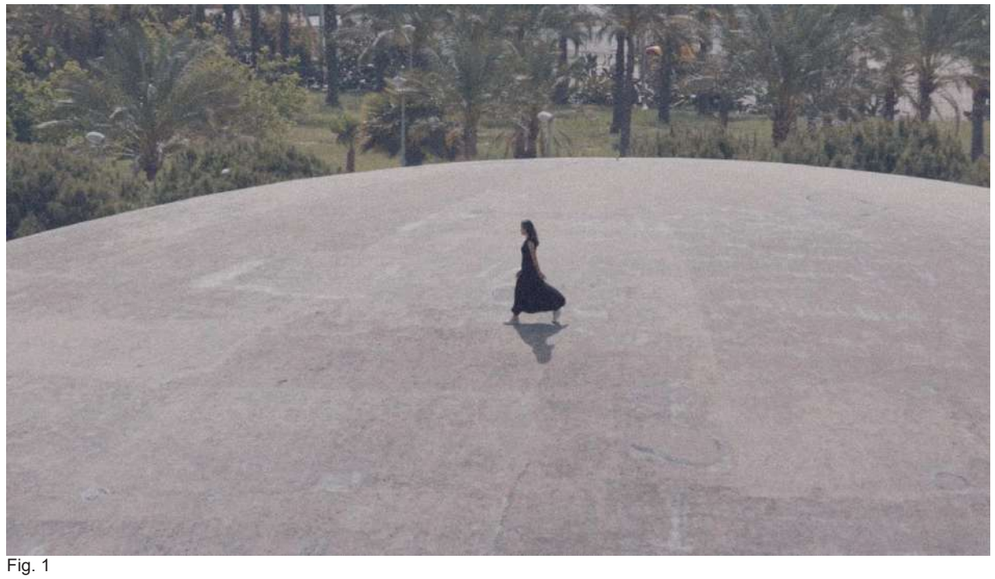


Fig. 1

Alia Farid's video performance for 32nd Sao Paulo Art Biennial shows a woman walking over a concrete dome. *Ma'arad Trablous* (Fig. 1) was recorded in the Rashid Karami International Fairgrounds, in the city of Tripoli, Lebanon. When watching the video in Sao Paulo, I was caught by a feeling of an estranged familiarity for the dome in Tripoli is in direct tension with an important form of the Brazilian architecture imaginary—one that not by accident also appears instantiated right outside the same Biennial pavilion I was in. Conscious of the similarities of the Fairgrounds, depicted in the video, and Ibirapuera Park, in which it would be screened, the artist plays with dialogues between media and space, content, and container. She explores the semiotic resonance of those two sites through close-ups and carefully positioned shots that make one question whether the scenery is familiar or not.

The dome's curve has a similar slope to the Earth's hemisphere. When the video zooms into its volume, the screen is divided between the dome on its lower half and the rich vegetation of large leaves that occupies the upper half entirely. Farid oscillates between fields, belonging sometimes to the concrete and others to the greenery. Her moving body is the only evidence of the dome's volume and scale. If not for her, the scene would look like a flat composition or maybe a photograph of the Earth seen from outer space. She circles the dome twice, flowing effortlessly with long strides. While conquering the geography of Tripoli's dome, the artist presents herself as an active and self-aware female body that contaminates the ideal laying-on-the-beach body encrypted in the curve of such architecture, or so the story goes. The video zooms out, finally unveiling the surrounding Lebanese urban landscape to the Brazilian Biennial audience: a new landing ground, to a familiar dome.

Farid's video carries back to Brazil a form that traveled to Lebanon in 1962 with architect Oscar Niemeyer. It represents the last leg of a journey that began in 1954 when Niemeyer designed his first dome in Ibirapuera Park. This first appearance of the dome was planned to host a planetarium, but during the project, pivoted to a Palace of Exhibitions. The program change is not surprising, since the dome functioned beyond the uses of its interior—its formal edginess expressed political ideas of the time, broadcasting progress both as technology and symbol. From this original site in Sao Paulo, Niemeyer's dome went to Brasilia in 1960, landing in the National Congress; then to Lebanon, as the Experimental Theater in 1963; to Paris, at the 1971 Communist Party headquarters and back to Brasilia as a cathedral in the 1980s. The spaces created by this traveling dome are endowed with an uncanniness on account of their repeated form, a horizontal dialogue that arises from architecture and also surpasses it.

The dome's travel, I want to argue, can be read as a symptomatic episode of the post-war developmentalist agenda in the Global South. By researching the historical background of these projects, it is possible to trace affinities that go beyond the architecture's form, since both countries—

Brazil and Lebanon—were immersed in ideas of development and both projects—the architectural and national—were interrupted. In this sense, Niemeyer's Brazilian and Lebanese domes are interconnected by ideas of progress, modernity, colonial heritage, and nation-building. While in Brazil the promise of democratic consolidation with the inauguration of Brasília in 1960 was postponed by the 1964 Military Coup, in Lebanon, the national development and cultural emancipation represented by the Fairgrounds was suspended by the Civil War in 1975.

This paper is structured in two parts. The first half, *One narrative of development*, focuses on the period of the dome's conception. The extensive repetition of the dome image in newspaper and magazine articles became an emblem of modernity that has supported the fictional narrative of development in both Lebanon and Brazil. The second half deals with the afterlives of these projects beyond the ideology that originated them. With the frustration of development, the domes' spaces are challenged by *Multiple narratives of appropriation*. Inspired by the work of Alia Farid, I document other stories of transgression that dilute the geometric purism of the dome into material reality. Through the act of climbing, I read the multiple re-appropriations of these twin domes as a symbolic reaction to the simplified narratives that fostered their constructions. Two histories overlap the narrative of development as a linear path and multiple smaller narratives of transgression.

2. One narrative of development

When political economists cited 'development' in the 20th mid-century, they meant "orderly economic growth", or better, "the steady rise in output in an environment of political stability." Trade would be the main engine to accomplish growth nationally and internationally. Taking inspiration from wealthy nations, and ignoring the marks of colonialism, this was the path to be followed by the South, where linear development "seemed as inevitable as the future itself."[1] If, in Latin America, this optimism emerges as incentives towards industrial growth, in the Middle East, it does so in the shape of the recent independence from the countries' colonial pasts. In both cases, development is embedded with nationalism.

Even with their differences in scale, Ibirapuera Park and Tripoli Fairgrounds channeled a similar mindset: a desire to establish their countries as great nations of the world. In the words of Panayiota Ioanni Pyla: "the project of development itself was not simply a technocratic framework for administrative reform and industrialization but an ideology, so too were dams and irrigation networks, highways, housing projects, or spaces of public recreation active participants in debates surrounding the modernizing dreams of progress, efficiency, and comfort."[2] This same ideology is inscribed into the built environment through the domes' constructions, as part of larger projects of urban infrastructure planned and financed by centralized states.

In addition to ideology, these projects share multiple modernist tropes: they were publicized by staged photos of a group of (all) white men pointing to a big architectural model; they were expected to become "the most modern constructions in the world" (Fig. 2) according to local newspapers; they represented a unique technological achievement for their countries—one made possible by the large availability of unskilled labor. They also share architectural gestures: a big marquee in relation to monumental smaller units, surrounded by rich vegetation with organic paths, palm trees, and, of course, a dome. Finally, they were both created to host International Fairs, serving as showcases for the progress of their cities, generating real estate interest, and attracting the eyes of an international audience.



Ambiente de expectativa faz prever, só no primeiro dia, a afluência de milhares de visitantes — O Parque Ibirapuera, o mais moderno logradouro público do mundo e o único de caráter permanente, no gênero — A grande "Marquise" — Programa das festividades inaugurais — Outras notas.



12-5-63

LA FOIRE DU LIBAN A TRIPOLI SERA LA PLUS MODERNE AU MONDE

Elle sera construite d'après les plans de l'architecte brésilien Oscar Niemeyer

Fig. 2

In *Nationalism*, Craig Calhoun affirms that the idea of nation is "inherently international and works partly by contraposition of different nations to each other."[3] The search for national identity is not an endogenous movement but, instead, strengthened by the encounter. Calhoun adds that the "Nationalist rhetoric offers a way of conceptualizing the identity of any one country that presumes the existence of other more or less comparable units."[4] These comparable units, as nation-states, are made visible by the different pavilions of International Fairs. On the threshold between reality and representation, these great events performed and embodied modern capitalism. In *The World as Exhibition*, Timothy Mitchell analyzes the "ordering up of the world itself as an endless exhibition,"[5] to claim that the West is organized with a logic of representation and meaning, like an extended exhibition that awaits an observer to grasp its meaning through experience. Through this lens, an international fair compiles two complementary systems of representation: first, the exhibition of different countries as comparable units and, second, the exhibition of the Fair *per se*, as proof of unity and grandiosity of its host nation.

In 1954, an International Fair took place in Sao Paulo as part of the year-long celebrations for the 4th centennial of the city. Ibirapuera Park was built to host the celebrations and later become an urban park in the manner of the great western metropolises. The slogan of the event, "São Paulo, the fastest growing city in the world," communicates much of the city's euphoria at the beginning of the 1950s. Ibirapuera Park has six buildings: an Auditorium, a Planetarium, Palaces of Industry, Nations and States, a restaurant, and a large, winding marquee that connects all the other units. Carlos A. C. Lemos, the head of Niemeyer's office in Sao Paulo, when asked about the process of designing the park, explains: "It was an exercise in creativity because we didn't know what the buildings we were building would be used for, how they would be occupied, how many people, etc. There would be an International Fair for the 4th centenary, but then, what?"[6] The architect's speech shows São Paulo's rampant impulse to build—the construction itself seemed more important than planning its future uses. Lemos speaks about the lack of specificity of the project's program of needs. Instead of a brief with the program's requirements, the guidelines for the project were to create spaces to combine "everything that could amaze the world about Brazilian progress."[7]



Fig. 3

The large rectangular pavilions concentrate a good part of the constructed area, but the dome, albeit smaller in footprint, received special attention among the magazines of the time. In *Acrópole's* 191st edition, it is described as **"**the most daring project ever built"[8] in the country. In the official magazine for São Paulo's 4th Centennial, a photograph by German Lorca (Fig. 3) illustrates the issue of the park's inauguration under the caption "Ibirapuera is born: the future has sprung from the earth." Amid the beaten ground of freshly scrubbed earth, a lady takes a boy by the hand to the Palace of Exhibitions, as if walking towards a spaceship. Whether sprung from the earth or landed from the sky, the dome represented an outcome of Niemeyer's long research with the plasticity of reinforced concrete. The dome was not only a form that somehow recalled the "future", but it was also a complex structure to build, it had a technological ethos both as symbol and practice.

In the newspaper *Folha de Sao Paulo*, an article from April 1954 follows the construction of the park: **"**Spending on the construction of the Palaces and marquee no less than 235 thousand bags of cement, 34,252 cubic meters of sand, 38,569 cubic meters of stone and 7,624 tons of iron. These figures demonstrate the grandeur of the set of buildings."[9] The pace of Ibirapuera's construction mimicked the growth of Sao Paulo—a growth translated into palpable units, such as cement bags and earth trucks. Another article, in the same newspaper, highlights the effort of **"**3,000 employees" working day and night to build the park as an "eloquent demonstration of São Paulo's dynamism."[10] There's no information on the origins of these workers, their living conditions, or personal profiles. They were merely impressive numbers, like those on the cement bags.

Not by chance, it was at the beginning of the 1950s that Sao Paulo had its first census listing *favelas* as a habitational type[11]—a reflection of the city**'**s growing demand for housing. Many of those who worked in civil construction, inside and outside Ibirapuera Park, had great difficulty in finding affordable housing and had to settle in informal communities. A small instance of this new condition of living was located inside Ibirapuera wetlands. To open space for the park**'**s construction, 200 families were relocated to another favela, Canindé, on the outskirts of the city. Canindé was also public land but used as an exchange strategy to relocate communities. Unlike favelas that emerge from unauthorized settlements, Canindé's precarious habitational complex was created by the State.[12] So while using the city**'**s growth as propaganda, the State did not address and, in fact, worsened the habitational crisis generated by this same growth.

In 1960, the second instance of the dome appears, as part of the Congress Building in Brasília. In this case, the domes are the only elements breaking the symmetry of Lúcio Costa's monumental axis in the center of Brasilia urban design, hosting both the Parliament and Senate. Photographer Marcel Gautherot, when documenting the construction of the new capital, explores the domes as both evidence of intricate human labor and a plastic expression. This double-layer expression of architecture and photography had a decisive role in the construction of Brazilian modern architecture and traveled to Lebanon to inform the architecture of the new capital via the newspaper *L'Orient Le Jour*. Niemeyer's association with a variety of different state-driven projects in Brazil and the plasticity of their disseminated imagery may be part of the reasons why, in 1962, the architect was invited by the Lebanese government to visit the country and propose what would have become the Rashid Karami International Fairgrounds.

If in Sao Paulo, the IV Centennial events aimed to consolidate the image of an already fast-growing metropolis, in Tripoli, the International Fair was to be the starting point for the growth of the city. Located in the rural area between the two urban nodes of old Tripoli and the littoral Al-Mina, the Fairgrounds were intended to generate a third centrality, to connect and help increase Tripoli**'**s urban fabric. The extensive piece of land dedicated to the construction of the Fair was a collection of private orange fields[13] who forcefully were sold to the municipality for a very low price, for the sake of progress.

The Fairgrounds was part of a five-year program of administrative reforms and major construction works orchestrated by left-wing president Fouad Chebab in the so-called Golden Age of Lebanon, in the 1960s. The plan aimed to improve the country**'**s identity and unity that had been harmed by its recent colonial past and artificial territorial delimitations.[14] The International Fair embodied the spirit of the Chebabist Era, combining investments in a peripheral region with a plan for a national project. The choice of Tripoli to host the fair also related to the efforts of Tripolitan Prime-minister Rachid Karami. Karami, as part of the Islamic Leftist party and follower of the Pan-Arabism movement, might have influenced the commission of a Brazilian Communist architect.

Still, Niemeyer**'**s invitation in the name of President Chebab is intriguing, as is the travel of the dome to this new context. Two years after the inauguration of Brasília, The repetition of form to this new context seems to establish a network of solidarity as if the collection of domes set a global space of acknowledgment. Furthermore, Niemeyer iconized a modern architecture detached to—but still in close dialogue with— the colonialist bias of the developed world. He was a perfect fit for the ideologies of Chebab, representing the endorsement of political ideology in addition to the aesthetic ideals of modernism.

Niemeyer arrived in Tripoli in July of 1962 and for two months he worked with his assistant and the Fair's committee on an overall plan for the site, consisted of drawings, a small descriptive text, and a physical model.[15] Soon after landing back in Rio de Janeiro, the architect published an article in *Módulo*, a magazine he co-directed, with a summary of the project's intentions. The commission's briefing was already initially ambitious, and Niemeyer's design took it to a whole new level. Niemeyer conceived an urbanization plan, containing residential buildings, commercial areas, tourist zones, parks, gardens, schools, crèches, shops, clubs, cinemas, churches, and mosques. The International Fair, in this urban development, constituted "a center of attraction — of a cultural, artistic and recreational interest — of the utmost importance with its theater, museums, sports grounds, and amusements."[16] Overflowing the official limits of the Fair's site, the drawings depicted several social housing linear buildings and a generic section for the intended urban design. With intricate structures spreading over a gigantic site, the Fairgrounds were designed for a future Tripoli that hasn't, to this day, come to be.

A dome requires wide-open space for its **"**landing," or better, it demands an environment of neutral context, a plain field of green grass, the modern *tabula rasa*. Isolated from interaction with the city that surrounds it, this architecture dissociates itself from the existing urban fabric to create a new landscape of simple lines, few colors, and legible geometry. Opening space begets displacement, and this architectural gesture indicates a pressing inconsistency between the fiction that justifies its construction and the real living conditions in these cities. The Fair aspires to model an external, Global alignment, but inevitably triggers internal dynamics—generating forces of attraction, as in Tripoli's real estate speculation, or the relocation of less-valued bodies as in the favelas of Sao Paulo.

The discourse around those spaces and events not only contributed to an illusory idea of how progress would evolve but also helped undermine essential needs that did not conform to the expected narratives. The dream of development, as Arturo Escobar highlights, "progressively turned into a nightmare. For instead of the kingdom of abundance promised by theorists and politicians in the 1950s, the discourse and strategy of development produced its opposite: massive underdevelopment and impoverishment, untold exploitation, and oppression."[17]

3. Multiple narratives of appropriation

> No matter how close one gets, everything here is seen from afar. I couldn't find a way to touch. But at least I had this in my favor: before I got here, I already knew how to touch from afar. I never got too discouraged: from afar, I would touch.[18]

Novelist Clarice Lispector visited Brasilia for the first time in 1962. On the occasion, she wrote "Visions of Splendor," a short essay that would become emblematic of her career and also of her first bodily

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confrontation with the new capital's architecture. Lispector affirms that it is impossible to touch Brasília. By doing so, the writer poetically expresses the discomfort that lies in the threshold of Brasília as a material reality and Brasília as a developmental fiction. No matter how close one gets, it is impossible to touch the fictional Brasília—the Brasília that exists in an ideal space and time. This feeling of impossibility towards reality is not just hers but appears behind many different aspects that characterize the afterlives of Ibirapuera Park and the Tripoli Fairgrounds.

The years that followed the conception of these projects dealt with myriad interruptions. After the opening of Ibirapuera, in 1954, its buildings were left empty without defined use. The park was conceived, built, and managed by the Commission for the 4th Centennial of São Paulo. After the year of celebrations, the transition to new management was extremely chaotic.[19] A report in the newspaper *A Gazeta* shows the deplorable situation in which the buildings were in the years that followed its inauguration.[20] Ibirapuera Park swung between periods of intense activity, as in the beginning of the 2000s with the celebrations of 500 years of Brazil, and moments of stagnation. As of the writing of this article, the Palace of Exhibitions (popularly renamed as Oca), is open to visitors but empty, reflecting the critical moment for culture in the country.

In Tripoli, the process of construction of the Fairgrounds extended for 12 years, with constant rescheduling and imminent financial breaks, and even then was never completed. The newspapers reported renewed promises of inauguration dates repeatedly throughout the 1960s.[21] In the early 1970s, a return to *laissez-faire* markets deferred the project's feasibility. As Adrian Lahoud posits: "Lebanon's political leadership was no longer willing or able to secure the conditions in which the project was supposed to operate."[22] In other words, the project would only be able to operate within a state interested in fostering nation-building projects. In 1975, with the rise of the Lebanese Civil War, the site was walled and transformed into a military base, following the invasion of its premises by the Syrian Army. The Fairgrounds were a fitting space for storing war tools, parking tanks, and for the army's settlement.

While researching The Fairgrounds, in 2019, I went to Lebanon right as the popular uprising that took over the country reached its pinnacle. Unable to access historical archives, my research took a new path, which emerged from the contact with several Lebanese people who shared their stories with me. One of them, Mira Minkara, earns her living taking tourists to see Niemeyer's abandoned masterpiece. While walking about the site, she told me that her brother used to trespass to play inside the Fairgrounds during the Syrian occupation. A couple of months later, her brother Adel Minkara (AM), agreed to talk to me (FC) about that time:

> AM: I call it a park, the park. See, in the 1990s in Tripoli we used to play all in the streets, with the groups of friends, it was a very safe city, different from Rio or (where are you from again? Sao Paulo). But we didn't have an Ibirapuera Park or Paulista, like in Sao Paulo. Tripoli back in the days had no outdoor activities, you just went to school and home and that's it. We could only play on the streets. And there was this place that was next to our home and we could see it from all the building's balconies because it's very big. And there were no buildings after ours. It was something easy and reachable for us.[23]

It's not a coincidence that Adel used to see the dome from his window; the construction of the fair generated an attraction node for Tripoli's real estate development in the 1960s. The long line of buildings that overlooked the fair was one of the things that struck me the most on the visit—all the balconies awaiting their promise of a privileged view that was never realized. I asked him how they used to enter the park.

> AM: We used to go play in the street so we knew about the structure, we didn't know anything about it but we knew it was prohibited to enter, because of the Syrian army. We didn't care, we wanted to go there all the time. We used to climb the fence or sometimes there were some spaces where the fence was broken so we could slip into. And we used to go inside and play football, climb in that huge structure, the dome. We used to play football up there.
>
> FC: On top of the dome?
>
> AM: Yes! Up! I remember that we used to get yelled at by our mothers because we used to always go down there after school. Go to the theater and play there. The problem was that there was always an army following us. It was the Syrian army, not Lebanese. They used to shout at us. One time they put us in a hole, just to stay, make us scared of the whole thing. But we didn't care and we kept going there. And it wasn't like now, I don't remember it as green as now. I remember there were tanks inside.
>
> FC: Do you remember if the dome was being used for anything at that time?
>
> AM: Nothing was happening inside the dome. It was abandoned as it is today, the same as it is now but it was much dirtier. It was full of things, wreckage. It wasn't that easy to go inside. The Fair, we didn't know what it was, because it was forgotten. Politically, Tripoli was abandoned, even in the war. Everything was centralized in Beirut. It was always forgotten. No one gave any shit about the Fair. They just wanted to survive the war.

I then mentioned to Adel that, although I never played soccer on it, I used to climb the dome in São Paulo too.

> AM: Oh. But our dome is much easier because it is a little broken at the end on the other side. There is a place, that is a bit broken, I think they should shoot there with guns because there are some places where the cement is gone, so you could put your foot and climb easily. I don't know maybe they've murdered people there, it was horrible to see the things that they did there… There is a place where the concrete is gone. There are these holes, I remember there were holes for us to grab so it was easier to go up.



Fig. 4

After the call, I went through my photos and found one that shows the small holes Adel mentioned (Fig. 5). They look like an improvised staircase carved in the concrete. Through a detail as small and haunting as a bullet hole, the political imaginaries are compressed into the scale of the body. The dome, the bullet hole, and Adel's climbing are complementary evidence of a continued history, one marked by cycles of hope, collapse, conflict, and transgression.

This unsettling nexus of development, politics, and geometry has led to multiple re-programming of Niemeyer's domes. The domes have been claimed and climbed upon. Their shells exist as separators of two spatial ambitions: one that is continuously trying to organize bodies into programmatic space (inside), and another that accommodates bodies in unexpected ways and triggers transgression (outside). Climbing the dome is an act of transgression in itself; transgression of architectural typology, since it shifts cover to the floor; and transgression of use, as it changes the function of the buildings.

The act of touching Niemeyer's architecture, described by Clarice Lispector and performed by both Alia Farid and Adel Minkara, ruptures the pure metaphorical interpretation of the dome, as a symbol of political thought, and bring forth a reading of its material reality that creates sites of interaction with the very real subjects that inform and respond to that political ideology.

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Fig. 5

Examples of the infinite possibilities of these bodily interactions abound: the construction workers climbing the dome to build its framing, carefully photographed by Marcel Gautherot in Brasília; the young kids that run over Oca, in Ibirapuera Park, ignoring the prohibition signs; the citizens that gathered in celebration in the election day of the first democratic president after the dictatorship in Brasília, 1986. (Fig. 5) Spanning from leisure to artistic explorations, political protests, and festivities, the domes are sites for collective assembly. These cases illustrate, to borrow from Anna Tsing, the "multiple futures" that "pop in and out of possibility" to contrapose "assumptions that the future is that singular direction ahead."[24] Niemeyer's traveling domes worked as an instantiation of an idea of development that hasn't taken into account Brazilian and Lebanese societies' major social and economic problems. Instead of continuously reinforcing these histories as promises of an ideal that has never been achieved, it is vital to broadening our gaze to the coexistence of multiple acts of transgression that deny simplifying narratives and aspire to new ways of imagining the future.

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4 Ibid, 93.
5 Timothy Mitchell, "The World as Exhibition," *Comparative Studies in Society and History* 31, no. 2 (1989): 218.
6 Carlos A. C. Lemos In: Fernanda Araujo Curi, "Ibirapuera, metáfora urbana. O público/privado em São Paulo. 1954-2017" (PhD diss., Universidade de São Paulo, 2018), 78.
7 Carlos A. C. Lemos, "Oscar Niemeyer in Sao Paulo" In: *Oscar Niemeyer - Classics and Unseen*, org. Lauro Calvacanti (São Paulo: Itaú Cultural, 2014), 90.
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10 "O conjunto arquitetônico do Ibirapuera espelha o progresso da nossa engenharia," *Folha da Manhã*, April 4, 1954.
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12. Ana Claudia Castilho Barone, "Ibirapuera: parque metropolitano (1926-1954)" (PhD diss., Universidade de São Paulo, 2007), 94.
13 Chloe Kattar, "Chronology and facts on the Rashid Karami International Fair," In *Cycles of Collapsing Progress: Visitor's Guide*, Karina El Helou, and Anissa Touati Corporation eds. (Beirut: Beirut Museum of Art, 2018), 8-16.
14 Fawwāz Ṭarābulsī, *A History of Modern Lebanon* [Electronic Resource] (New York: Distributed in the United States of America exclusively by Palgrave Macmillian, 2012), 111.
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16 Oscar Niemeyer, "Feira Internacional e Permanente do Líbano em Trípoli," *Revista Módulo* 30 (Rio de Janeiro: October 1962): 4.
17 Arturo Escobar, *Encountering Development : The Making and Unmaking of the Third World* (Princeton: Princeton University Press, 2012), 4.
18 Clarice Lispector, "Visions of Splendor." In The Complete Stories (New Directions Publishing, 2015), 574.
19 Fernanda Araujo Curi, "Ibirapuera, metáfora urbana. O público/privado em São Paulo. 1954-2017" (PhD diss., Universidade de São Paulo, 2018), 110.
20 Ibid, 111.
21 Chloe Kattar, "Chronology and facts on the Rashid Karami International Fair," In *Cycles of Collapsing Progress: Visitor's Guide*, Karina El Helou, and Anissa Touati Corporation eds. (Beirut: Beirut Museum of Art, 2018), 8-16.
22 Adrian Lahoud. "Fallen Cities" In *The Arab City : Architecture and Representation*, Andraos Amale (ed.) (New York, NY: Columbia Books on Architecture and the City, 2016).
23 Transcript of an interview held by the author on February 21st, 2020.
24 Anna Lowenhaupt Tsing. *The Mushroom at the End of the World : On the Possibility of Life in Capitalist Ruins*. (Princeton: Princeton University Press, 2015), viii.

Image Captions

Fig. 1. Still from *Maraad Trablous* by Alia Farid. Tripoli, 2016 (Courtesy of the artist)
Fig. 2. Left. "Ibirapuera Park, the most modern venue in the world." *Folha de São Paulo*, August 21, 1954. (Folha de Sao Paulo Archives). Right. Figure 12: "Lebanon's Fair in Tripoli will be the most modern in the world." *L'Orient Le Jour*, February 12, 1963. (L'Orient Le Jour Archives).
Fig. 3. "Ibirapuera is born. The future has sprung from the earth" Ibirapuera Park, Sao Paulo, c. 1953. (*Revista do IV Centenário de São Paulo* n.1, set. 1954, p.5. Historical Archive Wanda Svevo. Fundação Bienal de São Paulo).
Fig. 4. Bullet marks in the dome. Tripoli Fairgrounds, Tripoli, 2019. (Photograph by the author).
Fig. 5. End of dictatorship National Congress, Brasília, 1985. (DA Press/Diários Associados).

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Doppelgänger Architecture
The Dialectical Pair or the Dialectics of the Pair

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Abstract

What is an architectural doppelgänger like? How does the material condition of architecture affect this symbolic figure? In how many ways can an architectural pair be built and what are its implications? This paper proposes to examine the role of the doppelgänger as a project strategy in architecture. In this field, the figure of the double shows particular nuances derived from its spatial and material condition. The architectural project must face the challenge to build a pair of elements working as a unit and define their dialectical relationship.

The working hypothesis considers the doppelgänger as a reiterative character in architecture, with its own expressive charge derived from its ambivalent condition between double and unit, and the kind of relationship existing among its elements geometrical, phenomenological, and structural. The doppelgänger is a character inherited from popular culture and introduced in the artistic production by the romanticism in literature. Multiple authors have used the double to produce different effects: split personality, consciousness double, alter ego, clon, or evil twin. In the artistic field, the doppelgänger is a figure widely spread for its value as a technique to question what is real, original, or antagonistic, which is explained in Freud's theory on *Unheimlich*.

However, in the architectural field, there has not been a deep inquiry into its implementation in the project, neutralizing its conceptual background, and waiving its potentiality as a timeless structure. As a methodology will be examined the theoretical implications underlying the architectural assemblage of a pair, based on the concepts of difference and repetition, and will be selected architectural works to study different ways to build their dialectics. Through this analysis, it will be attempted to identify the predominant logics on which this organization system stands and to draw the possible consequences of its implementation in the architectural realm.

Keywords: doppelgänger, symmetry, dialectic, repetition, uncanny

1. Introduction

The extrapolation of an artistic mechanism to the architectural project is a fact that frequently takes place. Nonetheless, most of these occur in the field of visual arts and the cases of direct transference of resources from music or literature to architecture are less common. Considering paradigmatic examples as the collaboration between Iannis Xenakis and Le Corbusier for the mythical Philips Pavilion of Expo 58, the dynamics of translation from an artistic mechanism into an architectonic structure can be observed on few occasions.

The Doppelgänger is presented as an operational model, extracted from XVIII century romantic literature, reproduced and adapted for the cinema and photography along the XX century. Although its root is of a folkloric nature, through the years, it has become an aesthetic and formal resource, acquiring a growing autonomy as a project tool. So much so that both in literature as well as in the cinema, there are several investigations on this mechanism, which can participate in different contexts and features without losing its power as a representational mechanism of the uncanny, the ambiguous, and the exceptional. However, it is difficult to find studies about the use of doppelgänger in architecture, one that analyses the formal, aesthetic, and psychological consequences in the specific field of this discipline.

This article proposes a systematic analysis of the architectural doppelgänger by means of three aspects which structure it: its character -through the study of Sigmund Freud's *The Uncanny*-, its structure -defined by the concept of 'pair' and the idea of repetition-, and its system of relations -based on the concept of 'dialectics'. The objective is to prove its consolidation as a representational mechanism, analogous to the one in literature and cinema, but with its implications in architecture.

Doppelgänger is a German term that describes the double of a person alive, translated too as "a person deceptively similar"[1]. The word is made up of two particles: 'doppel', which means double, and 'gänger', translated as andante. The first records of this term are back to 1878 when it was included in Francis Grose's *Glossary of Provincial and Local Words*[2], where it is defined as the appearance of a person alive'. This figure is swiftly adopted as a topic in the late XVIII and early XIX century literature. Romanticism becomes interested in the phenomenon of the double as the materialization of the human being's dark and mysterious side. During that time, works such as *The Devil's Elixirs* (1815) by E. T. A. Hoffmann, *Frankenstein: Or, the Modern Prometheus* (1818) by Mary Shelley, *William Wilson* (1839) by Edgard Alan Poe, or *The Strange Case of Dr. Jekyll and Mr. Hyde* (1886) by Robert L. Stevenson is written.

The doppelgänger arouses a great attraction since the condition of the double can be explained in several ways, which leads to countless speculations. The interpretations cover from the phantasmagorical double to personality split, including the idea of an evil identical twin or the unknown clone. Several writers have used the mechanism of representing the double as an operational resource assigning different functions to it. Fiódor Dostoievski interprets it as the split of personality in *The Double* (1846). Italo Calvino as one self's split in *The Cloven Viscount* (1952). Julio Cortázar is a character with a symmetrical life in *Rayuela* (1963). Jorge Luis Borges as an encounter with himself in *The Other* (1975) and José Saramago as double identical and unknown in *The Double* (2002).

In the cinematographic production, there is a great variety of works in which this mechanism is used, and as in literature, there occur divergences in its interpretation. Thus, this topic arouses great interest. Director Paul Werenger presents the double as a utilitarian dissociation of the character in *The Student of Prague* (1913). Alfred Hitchcock captures the double as a symbiotic and dark relation between parts in *Strangers on a Train* (1951). Peter Greenaway as a questioning reality in *A Zed & Two Noughts* (1985) and Darren Aronofsky as the double opposed and object of desire in *Black Swan* (2010).

In architecture, there are also many examples of the incorporation of this figure in the project structure. However, a relation between its implementation and the doppelgänger referential framework is not frequently established. We can mention cases such as the *Lippo Centre* towers (1988) by Paul Rudolph, the *4x4 House* (2005) by Tadao Ando, or the *FRAC-Nord Pas de Calais* (2013) by Lacaton & Vassal. The present investigation proposes to deeply examine the role of the doppelgänger, which will allow us to determine the double 'character', and build a frame of specific relations to attempt to explain its operational dynamics in the field of architecture, through the tool named as 'dialectical pair'.

1.2. The Pair from a Psychoanalytic Point of View

The interest for the image of the double and its use in art has produced all kinds of reflections about the nature of specific triggers to activate its effect and what impact it has on perception and, thus, what this mechanism intrinsic character is. The investigation carried out by Sigmund Freud in his analysis on *The Uncanny*[3] (1919) stands out as a good example to trace the conditions which characterize the uncanny.

To start with, Freud postulates the word 'Unheimlich' (uncanny) as opposite and antonymous to 'Heimlich' (intimate, close, homely, domestic). Nonetheless, he quickly concludes that in some circumstances, there is a coincidence in the language between both terms. This would explain why the uncanny often arouses attraction and repulsion, and at the same time, fear, familiarity, comfort, and uneasiness. The ambivalence of this pair, owing to its double sense and its capacity to belong to two groups of representations, which, not being antagonistic, are very distant from each other is by all means outstanding. On the one hand, it has to do with its character of being familiar and comfortable, and, on the other, with that of the hidden and concealed aspect. Among others, he quotes Friedrich Schelling as a way to illustrate: "We call Unheimlich to anything that should have remained secret, hidden...however, it has appeared"[4]

The 'double' or 'the alter ego' appears as a key character in the uncanny representation. Freud exposes the different ways in which this model can be seen: ego splitting, ego partition, ego substitution, and lastly, through the constant return of the cognate in the repetition of gestures, names, or attitudes. In this sense he establishes three ways in which the double is represented:

In the first place, the image of a double protector whose aim is to elude death. This representation is derived from the child's primary narcissism as a splitting destined to capture the danger of extinction or disappearance. In the second place, he postulates the presence of a double derived from ego evolution. In this version, it is developed as an opposition to the other part of the ego and its function is self-observation and self-criticism, complying with the role of psychic censure and equivalent to the voice of conscience. In the third place, it appears as the manifestation associated with the desire of being someone else: "(…) all the possibilities of our existence which have not been fulfilled and that imagination does not surrender to quit."[5] It has to do with the personal aspirations, which have not been achieved, and the double, in some way, represent or personifies.

Freud concludes his study about the double image stating: "But once exposed in this way, the double's explicit motivation', we must come to the consensus that none of what has been explained so far is enough to account for the extraordinary uncanny character of this figure."[6]



Fig. 1

2. The Construction of the Dialectical Pair in the Architectural Context

From a morphological point of view, the architectural doppelgänger can be observed that the constant relies on the presence of a 'pair'. Independently from the double character -protector, conscience, or desire-, it is represented as a duplicate, which opposes its original. The effect only makes sense when visualizing the pair simultaneously. Thus, it is possible to think that the pair representation possesses an expressive charge of its own, which is shown in both the formal as well as the psychological dimension.

The pair introduces two fundamental aspects in the conceptual as well as the formal realm: the ambiguity between the double and the unit and relations of tension built between both elements. Probably, this ambiguity is derived from the lack of acknowledgment about the pair formulation principle. That is to say, due to a double presence, the intellect is driven to explain its nature: try to figure out how it has been generated, if there is an original and a replica, what are their differences or

the way they relate to each other. The pair image is so powerful because it denies singularity. Therefore, visualizing the pair provokes reality strangeness.

Gilles Deleuze starts the introduction of his book *Difference and Repetition* with the statement: “Repetition is not generality”[7]. He establishes, in this way, the distinction between repetition and similarity. For him, both similarity and equivalence belong to the world of generality. By means of the contrary, there appear reflections, echoes, doubles, and souls. The repetition is understood as a reaction: “To repeat is to react to something unique or singular, which has nothing equal or equivalent.”[8] He postulates that an -apparent- external repetition is a consequence of an interior one, a deep and secret vibration. And even if it is possible to represent repetition as an extreme similarity, the natural difference between them has to be taken into account.

Deleuze thinks of generality as apparent equivalence and equality thought, while repetition represents the emphasis on something unique: “Therefore, generality as the generality of a particular character and repetition as the universality of a singular character is opposed.”[9] In this way, repetition is presented as an operational resource to stand out in the generality context. In this trend of thought, it is intellect, which has the capacity to generalize while the senses perceive singularities.[10] The repetition, as ‘Freud’s double, is incomprehensible from the point of view logic and, that is why it works as a high-impact representation perception.

Repetition implies duality and this condition can be understood from the perspective of symmetry. According to Deleuze, there exists an arithmetic symmetry - which is derived from entire or fraction coefficients - and a geometric symmetry - based on irrational proportions or relations-. Thus, a sort of repetition dual condition is postulated: an apparent perception accompanied by underlying relations rules. Understand repetition from a dual logic implies deep reciprocity between both parts. In fact, repetitions are not independent. For Deleuze, one is the singular subject, the heart, and interiority of the other. The other is only the external cover, the abstract effect. Duality is formal and conceptual.

From this point of view, repetition is the mechanism, which activates the pair in multiple dimensions. At the same time, the movement originates it, and the drive that keeps it on. It is the dialogue between repetitions -a kind of bipolar tension-, which constructs the story and determines the way/shape. Therefore, we could say that the pair comes from repetition, and it poses a dialectical relation between parts.

Dialectics is presented then as the active mechanism of pair relation. On the one hand, it complies with the function of consolidating the unitary perception of the whole, and on the other, between the parts. Due to the variety of pair types, which can be found in architectural doppelgänger, we have chosen three dialectical pairs, which are operational for our goal: Friedrich Hegel’s synthesis dialectics, Theodor Adorno’s negative dialectics, and Walter Benjamin’s dialectical image.

Dialectics in Hegel is shown as a transference of the debate philosophical method towards a history building mechanism. That is to say, the reality is made up of opposite terms which being in conflict, result in new concepts. This trend of thought allows us to explain the change, keeping each element's identity. This dialectic is based on the foundation that an idea -thesis-, generally historic, social or philosophical when being developed in detail reveals diverse aspects which oppose with each other -antithesis-, but finally, there arise a way of re-conception reconciling aspects apparently contradictory. Applying this pair dialectical conception, we could understand its configuration from opposite parts which find balance through synthesis. It would be a dynamic set in its interior -by means of confrontation- and static in its exterior -through synthesis-.

Adorno’s negative dialectics confronted with the pair model means an alternative result. In this, Hegel’s dialectics is criticized. The latter, as we have seen, holds that a positive result comes from a contraposition movement. On the contrary, Adorno emphasizes the unfinished character of any conceptual confrontation: thought dialectical movement does not end up in a synthesis that surpasses the opposites and shows the incoherence as evidence of reality contradictory nature. The negative dialectics is a model without synthesis, where there is no reconciliation of opposites. Neutrality is abandoned and the focus is shifted to difference. This position means, after all, an attempt to break up with all systematicity, expressing the theory through models or fulfilling its own critical philosophy. The pair interpreted from this point of view, would suggest an unbalanced model, in constant redefinition: a pair of opposites in permanent tension and movement, working as a critical exercise of a double over the other.

Finally, we would like to do this exercise based on Benjamin’s dialectical image. In the previous conceptions, dialectics is used as a means to understand the historic progression, both in events and philosophical thought. In Benjamin, the focus is more on the way to perceive change rather than its dynamics. The dialectical image power consists of the new time conception, based on the la notion of instantaneity. Time is made of instants and this breaks with the idea of neutrality and causality. The

dialectical image is that sense configuration that comes from the combination between the physical and past image and the one proposed by the historian. From this perspective, the pair works with non-linear and undetermined dynamics, from an instantaneous experience and in discontinuity.

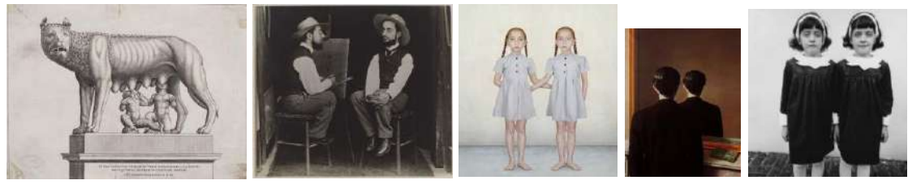


Fig. 2

3. The Dialectical Pair: Analysis of Three Cases in Architecture and its Consequences

Considering the doppelgänger is an autonomous representation mechanism and assuming its presence in architecture, as well as in literature or cinema, it is essential to develop the necessary tools for its understanding in the field of architecture, in particular. As seen in the referential frame described above, this research postulates ‘the dialectical pair’ as the mechanism to explain how the doppelgänger representations work in architecture and its implications.

In the first part of this paper, we could see the dialectical pair theoretical frame to figure out how it is activated, the way it is constructed, and what consequences it generates. Hereafter, these case analyses are presented in order to exemplify these statements. The cases are grouped into three categories, defined by their character, their spatial structure, and the kind of relationship with their parts: the ‘Static Pair’, the ‘Temporal Pair’, and the ‘Ambiguous Pair’.

3.1 The Static Pair



Fig. 3

The first group of the architectural doppelgänger has some formal, clear, and forceful characteristics, which favors its perception as double. It could be said that its generating power is its axial symmetry. Its central axis is constituted by emptiness, which allows each element of the pair to be identified and delimited. These cases are characterized by the fact they are a static and balanced set. On the one hand, there is weight correspondence between both parts, and on the other, a formal rotundity that transmits the idea of stability. When observing a static pair, you have the idea that it has always been there. Therefore, its balance goes beyond its composition to achieve a temporal dimension.

The nature of this pair is based on the ‘double protector’. The repetition is the ego identical copy, born to ensure permanence. Its static and categorical structure represents the values of trust and safety, and its composition releases an intimidating and monumental image. In fact, this pair works as a

mirror and, for that reason, it supposes the representation of an ideal. It acts as a scenography, overwhelming for its singularity and perfection, with the capacity to transport us in time and space. In Michel Foucault's words: "The mirror is a utopia since it is a place without place. In the mirror, I see myself where I am not (…), a kind of shadow which gives me my own visibility back, which allows me to look at me there where I am absent: mirror utopia."[11]

This pair of dialectics is deeply synthetic. Even when tensions are not apparent, both elements of the pair are different. There exists a hidden struggle to seek the original vindication. It is not by chance that in twin towers projects there are always implicit questions such as: Which one was finished firstly? Which one is taller? What difference is there between them? However, there is not a dominant or winning part. There is a synthesis between them, which tenses and joins them. Extrapolating this to an image of nature, this pair would be that of identical twins. They are perceived as a pair although each of them is an individual subject. It is admitted that there are character differences, but these remain in second place regarding their degree of apparent similarity.

This pair has the lowest value of possible ambiguity, derived from its synthesis level. It is possible to delimit and understand each pair double and it is impossible not to identify them as a unit. Perhaps, due to this, they are often found in the city. The representation of twin buildings is a very common image in urban space. At the same time, they have a formal power they also have a great utilitarian capacity. In most cases, the implementation of this pair is linked to the accentuation of road axes or framing of urban landmarks. In the same way in the case of high-rise developments, they contribute to the particular skyline of any city.

3.2 The Temporal Pair

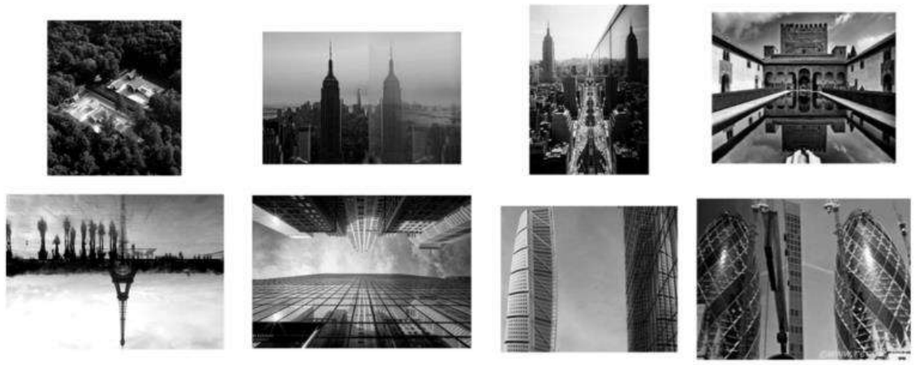


Fig. 4

The second group of the architectural doppelgänger is not presented as an understandable and definitive image. Its perception implies a great degree of abstraction. It appears unexpectedly and it possesses an instantaneous temporality. We could say that time is its most essential condition and its constitutive engine. Its dynamic and provisional nature is derived from this aspect. It is as a pair in constant redefinition since it is directly related to environmental phenomenological factors. Its conformation is not fixed. It can only be perceived from a specific point of view and at a precise moment. Thus, it denies all apparent neutrality and deposits its presence on the own observer. These conditions increase the degree of attraction they produce because the observer becomes aware of the phenomenon's singularity.

The characteristic of this pair operates as 'double conscience'. In this case, the doubling is the voice that reminds us of reality's temporal condition. This pair, in comparison with the static pair, is neither identical nor intends so. Both parts work by complementarity, even though they do not produce a unanimous or definitive result. There is a high extent of dependence between them, although each of them expresses itself in a different way, and for that reason, they represent divergent but not opposite values. Its structure is ephemeral and it is activated in instantaneity configuring a double shape with unexpected and surprising content.

The relation of this pair is given by its degree of spontaneity, based on the dialectical image principles. It is a virtual, passing, ephemeral representation, which seems to establish an indirect and sensorial dialogue. Perhaps, stimulated by that, the observer tries to capture it through external means. It arises as lightning, where the unit duplicates to configure a pair of meaning, and its definition varies for each observer, it is unique/unrepeatable.

This pair represents criticism of what is established and has the effect of questioning what is real, solid, stable. Its utilitarian nature is much less than the one of the pair described above. Nonetheless, there are examples of its use in circumstances where astonishment, surprise, or exhilaration effects are looked for. These pair most remarkable operative qualities are its capacity to evoke other realities, ruled by alternative laws, and to maximize the impact of a singular element in the environment. This pair usually arises in the urban context as a controlled act in large-scale institutional buildings or in religious spaces generated from reflections on bodies of water, facades, or reflective pavements. However, this pair's power lies in its temporal volatility and the variability of what seems to be apparent.

3.3 The Ambiguous Pair



Fig. 5

Finally, the third group of the architectural doppelgänger is defined by its counter position. The drive generated by this pair is the open struggle between the parts: it is a pair of irreconcilable opposites. Even if they are recognized as a pair, its structure expresses the high degree of heterogeneity of its composition. This pair is unstable. Its static system works by counterbalance, but it is not always compensated. The relation between its parts is through a complex and difficult-to-understand articulation. It is not possible to speak about a balance between its parts since there is no way to disassociate them, without risking the pair. This pair can be composed in two ways: from different structures, which have distinct internal logics, joined by means of identical articulations, or from identical structures combined in a complex way.

This pair character is that of 'double desire'. The duplication represents unachieved aspirations and desire projections. It is a passionate pair, based on the struggle for survival. The double is the manifestation of the opposite, what is longed for. This implies a high degree of contradiction in the relation, which is usually reflected in pair formal expression. Although its constitution is not very clear, it is impossible not to recognize the unit between the parts since they are linked in continuity. For that reason, it is not possible to identify the limit or autonomy of each part. In its structure, we can perceive each element's rotundity, which expresses its singularity, although there is an awareness that survival depends on the permanence as a pair.

The relation between its parts is by means of negative dialectics. Each double is an opposite compelled to interact with the other, even though this does not imply any degree of synthesis. Pair heterogeneity, opposition, and diversity are expressed openly without any concern for showing coherence. Contradictions are explicit and show a complex reality where they are constituted. This pair can be assimilated in the biological level as the Siamese twins. Frequently, they are associated with a fortuitous nature deviation and pose a challenge. There is not a clear position to determine whether their wellbeing is linked to remaining together or separate, although this speculation arises from the need of establishing their limits and differences. As regards architecture, it means understanding the structural types that conform to each unit and the kind of articulation, which connects them.

This pair shows a great degree of formal ambiguity, which inevitably represents its conceptual indetermination. When this pair appears in the urban context, it shows the complexity of structures, volumes, or program superposition. Its hybrid shape makes us aware of a model that is quite unclear, difficult to classify, and deeply heterogeneous.

Notes

1 On-line German Dictionary Woerterbuch.
2 Complete original name: A Glossary of Provincial and Local Words used in England (1787). John Russell Smith, London, 1839.
3 Essay “Das Unheimliche” published in 1919. Consulted version: FREUD, Sigmund: The Uncanny (1919) in Complete Works. Freud total electronic version, 2014, p. 1-14.
4 Schelling, Friedrich in Freud, Sigmund: The Unicanny (1919). Freud Complete Works, Amorrortu Editores, Buenos Aires, 1978, p. 4.
5 Freud, Sigmund: The Unicanny (1919). Freud Complete Works, Amorrortu Editores, Buenos Aires, 1978, p. 8.
6 Ibídem (5), p. 8.
7 Deleuze, Gilles: *Difference and repetition*. Amarrortu Ed., Buenos Aires, 2009. p 21.
8 Ibídem (7). p 22.
9 Ibídem (7). p 22.
10 In Deleuze’s words: “The head is the organ of exchange, but the heart is the amorous organ of repetition. (It is true that repetition also concerns the head, but precisely because it is its terror or paradox.).” Ibídem (7). p 51-53.
11 Foucault, Michel: From Other Opaces “Des espaces autres”, Architecture, Mouvement, Continuité, N5, October, 1984.

Image Captions

Fig. 1.
Rene Magritte in Bowler Hat (Exposición múltiple), 1965. Duane Michals. © Pace/MacGill Gallery.
Poster of the theatrical adaptation of The Strange case of Dr. Jekyll and Mr. Hyde, author unknown, published by the National Printing & Engraving Company, Chicago, 188-.
The Shining, movie scene, directed by Stanley Kubrick, 1980. The double appears as a sinister mechanism for questioning the real.
A Zed & Two Noughts, movie scene, directed by Peter Greenaway, 1985. The characters discover their Siamese origin and their perception of the environment and their own nature is transformed.
Fight Club, movie scene, directed by David Fincher, 1999. The double embodies another who lives without the repressions or fears of the original.
Fig. 2
The Capitoline Wolf with Rómulo y Remo, author unknown, 1552. The struggle between the twin brothers as the representatioof the foundational myth of Rome. © National Gallery of Art, Washington DC.
Diane Arbus, Identical Twins, Roselle, New Jersey, 1966.
Maurice Guibert, Double portrait of the painter Henri Toulouse-Lautrec, 1892.
Loretta Lux, Sasha and Ruby 4, 2004. © Loretta Lux.
René Magritte, La reproduction interdit, 1937.
Fig. 3.
860-880 Lake Shore Drive Apartments (1949), Mies Van der Rohe. © Hagen Stier.
Mapfre Tower (1992), Ortiz León y Torre del Hotel Arts (1992), SOM.
Drawing of the Bond Centre (Lippo Centre) (1988), Paul Rudolph. © Paul Rudolph Foundation.
Twin Towers, Minoru Yamasaki, 1973. © Elliott Erwitt.
Twin churches of Santa Maria dei Miracoli (1679), Carlo Rainaldi y Carlo Fontana, and Santa Maria in Montesanto (1679), Gian Lorenzo Bernini.
Hejduk Towers (1992), John Hejduk, 1992. © Luis Miguel Bugallo Sánchez.
Pennzoil place (1976), Philip Johnson. © Ron Scott.
KIO Towers (1989), Philip Johnson y John Burgee. © Shutterstock.
Fig. 4.
The Ise Grand Shrine, rebuild every twenty years. © The Asahi Shimbun
Empire State Building (1931), Shreve, Lamb, and Harmon. © PIXABAY
Eiffel Tower (1889), Gustave Eiffel. © Beth Munro.
Chrysler Building (1930), William Van Alen. © Jörg Dickmann.
Empire State Building (1931), Shreve, Lamb, and Harmon. © Navid Baraty.
Los Arrayanes Patio in La Alhambra (s. XIV). © Tuxyso / Wikimedia Commons.
Turning Torso Tower (2005), Santiago Calatrava. © Perart / Shutterstock.
St Mary Axe (2004), Norman Foster. © Reggie Thomson.
Fig. 5.
The Pyramids Building (2007). Soeters Van Eldonk Architects. © NRC Handelsblad, Leo van Velzen.
Frac Nord-Pas de Calais (2014), Lacaton & Vassal. © Philippe Ruault.
The corner between MTR Building and the Hang Seng Tower (1991), Wong & Ouyang.
Otto Wulff Building (1914), Morten F. Rönnow. © Claudio Valdés.
Drawing of the Tenochtitlán High Temple, Códice Ixtlilxochitl, 1552.
Gemini Residences (2005), MVRDV.
Les Jumelles (2013), YH2. © Pascal Annad.
San Remo Building, (1930), Emery Roth.

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Memory museums as representative places in Latin America

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Abstract

Memory places exist in the material, symbolic, and functional sense. They differ from places of history by the desire for memory. Its main objective is to stop time, block forgetfulness, being a construction lived in the present.
The paper proposes a reading from the experience at memory museums in Latin America, which addresses moments of violence and human rights violations that occurred during the 20th century. Identifying through the design strategies, the existence of urban equipment, designed based on participative practices, education, and social justice. The Latin American approach addresses the path of education, the result of government organization, population, and entities representing the victims, exposing different points of view, for the formation of a narrative with greater visibility to different social groups. It seeks to understand and compare the relationships between buildings and cities, based on the experience at *Centro de Memória, Paz y Reconciliacíon* in Colombia, *Lugar de la Memória, la Tolerância y la Inclusión Social* in Peru, and *Museo de la Memória y los Derechos Humanos* in Chile.
Repairing the victims and overcoming the events that occurred are the fundamental themes and one of the main characteristics of these museums. The designs of the buildings start from the premise that memory in architecture is the memory of the place, therefore revaluing, reorganizing, and reconnecting the urban fabric in which the museum is inserted, taking into account the territorial, urban, and cultural aspects is a great contribution of architecture to face the memory of facts, violence, and pain that occurred.

Keywords: Memory museums, design strategies, urban equipment, immaterial memory, Latin America.

Introduction

In many contemporary cities, urban development and growth are related to the ability to attract investment and make cities competitive, with public authorities investing in infrastructure, subsidies, and regulatory relief for large investors (FAISTEIN,2011). This development model can be seen as privatization of urban management, resulting in the exclusion of minorities and low-income people to the detriment of the interests of private companies. In opposition, it can also be seen as an opportunity to transform areas of the city where public resources are limited, or the possibility of incorporating measures that minimize the economic and social effects generated (JAJAMOVICH, 2019).

The construction of memorials, the protection of spaces as places of memory, the establishment of commemorative dates, the creation of museums with themes that seek to prevent the repetition of acts of human rights violations, are some of the initiatives to resignify urban areas, making public spaces more representative to different social groups with the aim of providing fairer cities (FAISTEIN, 2011). These actions are relevant not only to the victims directly affected but also to the whole society (SOARES; QUINALHA,2011). The traumatic nature of the conflicts presented, have a high potential for social disintegration, and pose the challenge of representing the irrepressible. They can be understood through the memory of pain as well as immaterial culture.

Through the spatial experience at the *Museo de la Memoria y los Derechos Humanos* (Museum of Memory and Human Rights) in Santiago, Chile, the *Lugar de la Memoria, la Tolerancia y la Inclusión Social* (Place of Memory, Tolerance and Social Inclusion) in Lima, Peru, and the *Centro de Memoria, Paz y Reconciliación* (Center for Memory, Peace, and Reconciliation) in Bogotá, Colombia, the article reflects on how memory museums can rescue local identities from the construction of collective memory about violent events, resulting in spaces of public use, accessible to different layers of the population, making public actions of violence and disrespect for human rights, as opposed to 19th-century museums that brought objects of great material value displayed according to the criteria of curators and authorities (FRANCK,2016).

19th Century Museums

The concept of public heritage emerged at the end of the 18th century from the French Revolution and created the conditions for breaking the traditional vision of the museum program that was associated with private collections located in palaces and houses of scholars, with restricted access to the general public, formed by the preference of their owners or scientific requirements of the disciplines that maintained them, and promotes the formation of public collections in spaces with access to the entire population (FOUCAULT, 1986; HOOPER-GREENHILL, 1992).
The emergence of the public museum during the 19th century divides the space into private, where the curator as a specialist produces the exhibitions, catalogs, and the public space, where the visitor consumes what is produced. In the newly formed European Republics, spaces and objects belonging to kings, aristocracy, and church were appropriated, transferred, grouped, and redistributed into public spaces, telling new stories, and can be used as a denunciation of the old forms of elite control, praising democracy and the new republics (HOOPER-GREENHILL, 1992).

The modern conception of the museum is consolidated with the creation of important museum institutions in Europe such as the Rijksmuseum (1808) in Amsterdam, the Prado Museum (1819) in Madrid, the Altes Museum (1810) in Berlin, the Hermitage Museum (1852) in St. Petersburg (SUANO, 1986). Two museum models are perceived in the period: those related to history and national culture, with a celebratory character like the Louvre Museum (1793) in Paris, and those related to scientific movements focused on prehistory, archaeology, ethnology, like the British Museum (1759) in London (JULIAN, 2006).

They find as architectural typology the palaces, many of them transformed into museums, structured by the succession of large interconnected rooms that could house all kinds of objects, the security with which these buildings were guaranteed the control of what would be exposed and the image of an important building, already consolidated in the imagination of the population, would respond to the desires to represent how much the riches of the countries were accessible to the population (KIEFER,2001).

Memory Museums

Places of memory are spaces that exist in material, symbolic, and functional sense. Differentiate themselves from places of history by the desire for memory. Their main objective is to stop time, to block forgetfulness, being a current phenomenon, a construction lived in the present, while history represents the past (NORA, 1981). Its relationship with cities reinforces its collective dimension, providing urbanity and representability, becoming one of the most characteristic public places of contemporary cities (MONTANER, 2003).

According to the International Coalition of Sites of Conscience, museums and spaces dedicated to the recognition of human rights violations have been developed in different regions of the world. In Africa, the Kigali Genocide Memorial (1999) in Rwanda and the Apartheid Museum (2001) in South Africa. In Asia, the Toul Steng Genocide Museum (1980) in Cambodia and the Nankin Massacre Memorial (1985) in China. In Europe, the Jewish Museum in Berlin (2001) in Germany and the Museum of Auschwitz-Birkenau (1947) in Poland. The main themes portrayed are: colonialism, slavery, genocide, ethnic-religious issues, freedom of expression, feminism, the holocaust, immigration, and civil rights

Forty-one institutions of memory, tolerance, and reconciliation in Latin America were raised from the database of the Latin American and Caribbean Network of Sites of Memory (RESLAC). The main themes portrayed are dictatorships, state terrorism, paramilitary guerrillas, and urban violence with museums in Mexico, Colombia, Peru, Chile, Argentina and Uruguay. Their headquarters were grouped according to three categories: when they occupy improvised or structuring places; when they occupy places where the events occurred, restored and reorganized to receive exhibition spaces; and when they occupy new spaces, designed to be museums of memory. Within the last category, the spaces presented in Fig.1: 1-*Museo Memória y Tolerância* (Museum Memory and Tolerance) in Mexico City, inaugurated in 2010, to portray crimes against humanity; 2-*Museo Casa de la Memória* (Museum House of Memorie) in Medellín, Colombia, inaugurated in 2015, to portray the city's urban violence; 3-*Centro de Memória, Paz y Reconciliacíon* (Center for Memory, Peace, and Reconciliation) in Bogotá, Colombia, inaugurated in 2012, to portray the country's armed conflict; 4- *Lugar de la Memória, Tolerância y la Inclusión Social* (Place of Memory, Tolerance and Social Inclusion) in Lima, Peru, inaugurated in 2015, to portray the armed conflict in the country; 5- *Museo de la Memoria y los Derechos Humanos* (Museum of Memory and Human Rights) in Santiago, Chile, inaugurated in 2010, to portray state terrorism in the country; 6- *Parque de la Memoria* (Memory Park) in Buenos Aires, Argentina, inaugurated in 1998, to portray state terrorism in the country.

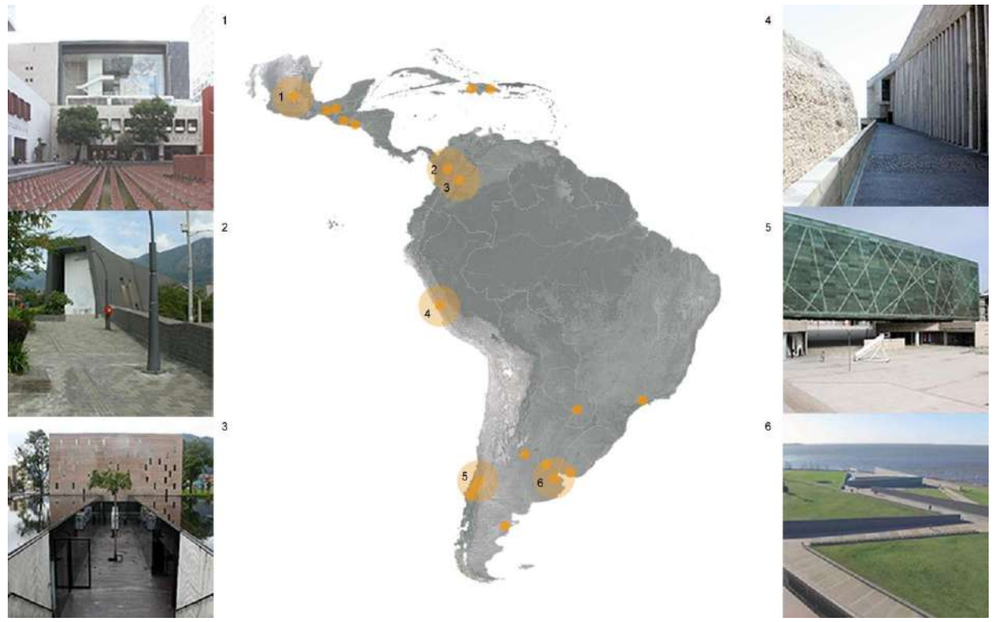


Fig. 1

The term "museum" is soon replaced by more neutral ones such as "center", "place", "park", perhaps they seek to dissociate themselves from the idea of spaces for collection of artifacts, but by the active work of building collective memory. The word "memory" appears in many museums located in Latin America, all those highlighted in the research, which does not occur in other parts of the world, which suggests memory as a demand for human rights, or the participatory process of victims' organizations in the constitution of museums, or the importance given to the accounts of victims, which can often be contradictory to the official historical narrative (FRANCK,2016).

The Latin American section suggests the path of education, the fruit of the organization of the state, the participation of the population and entities representing the victims through meetings and hearings for the elaboration of a participatory program that broadly represents the facts that occurred pointing

out their different points of view, memories, accounts to form a collective history. The themes of reparation to victims, overcoming the events and social inclusion are fundamental and characterize museums. The projects of the buildings, result of international competitions, start from the premise that the memory in the architecture is the memory of the place, therefore to revalue, to reorganize and to reconnect the urban fabric next to the museums, taking into consideration the territorial, urban and cultural aspects. They seek to respond to the interests of communities, generating a process of awareness and appropriation of their particular histories. Their actions are related to the territory, the heritage, and the community, overcoming the traditional concept based on a building, a public, and a collection (MORA, 2013).

Museo de la Memoria y los Derechos Humanos



Fig. 2

The *Museo de la Memoria y los Derechos Humanos*, located in Santiago, Chile, was designed by the Brazilian architects of Estúdio América (Mario Figueroa, Lucas Fehr, and Carlos Dias) and was inaugurated in 2010 as part of the celebrations of the bicentenary of Chile's independence. The theme of the site is the end of the rule of law in the country, the military occupation, and the closing of the national congress. Headed by General Augusto Pinochet, the military dictatorship left more than forty thousand people, victims of torture, disappearances, and executions between 1973 and 1990, according to the Truth and Reconciliation Commission, causing deep marks in Chilean society.

The narrative presented in the museum is based on historical facts, images, and accounts of the victims and their families. It presents several versions, in order to assemble from fragments, a collective memory (VV.AA., 2008). The accounts seek a diversity of points of view, greater representativeness, beyond those existing in official documents.

The museum is located in the Yungay neighborhood, west of downtown Santiago. As part of the city's cultural expansion, it houses museums and cultural centers. The land chosen for the construction of the Matucana Complex would house an intermodal station relocated with the decision to extend the subway line, leaving excavations in the ground between 6 and 12 meters deep (VV.AA., 2008).

The project understands the historical layout of the city where the public space is not built. The museum is an open block (FIGUEROA; FEHR; DIAS,2007) with two squares interconnected and open to the city, with entrances at various points. Pedestrians can walk inside the block as access to the city. Respecting the height of existing buildings promotes the integration with the Salvador Sanfuentes School and the extension of the Quinta Normal Park. The characterization of Chile as a country between the Pacific Ocean and the Andes Mountains and the extraction of copper as the country's

main export material serve as symbolic strategies for identity, land occupation, and choice of materials used.

The occupation strategy of the museum takes advantage of a situation excavated from the previously existing land, creating a semi-undergrounded square accessed by ramps and stairs, a suspended volume of twenty meters wide by eighty meters long, divided into three floors, crossing the land transversely in an East-West direction. Over four pillars and water mirrors, this suspended volume covered with translucent copper sheets filters the light that falls on the building. On days where the sun's rays are more intense, the expositive areas are illuminated differently according to the time of day. The museum has glass façades and internal walls also made of glass, with different treatments to control natural light according to the needs of the environment. The strategy of using materials such as glass, perforated copper sheets, and water mirrors, reinforce the idea of reflection. In some moments, the image of the city seen by the openings is confused with the exposed images. At night, the effect is reversed and the city observes the interior of the museum.

Arriving through the Quinta Normal subway station, on the other side of Matucana Avenue, is the *Museo de la Memoria y los Derechos Humanos* (Fig.2 - 1). A ramp square takes us to the underground where the museum entrance is. The noise of the city is getting behind us as we descend. The symbolism of a square all in concrete, with the names of the victims and the thirty articles of the universal declaration of human rights written on the walls, prepares us for the theme portrayed inside the building. A copper-coated volume with greenish tones that seems to float over the square (Fig.2 - 2), occupying a large part of the block, allows pedestrians to pass through. Ramps and stairs function as benches or even bleachers for shows and presentations (Fig.2 - 3).

Access from the subway station directly to the basement of the museum has been planned, but not realized in the final project. The square open to the city was surrounded right after its inauguration, controlling the entrance and exit of people. The office buildings that make up the project have not yet been built. There would be an internal garden for these buildings on the same level as the museum's entrance square, being a counterpoint to the dry squares of the memory museum. As the whole was partially built, the reading of the work is impaired.

Lugar de la Memória, la Tolerância y la Inclusión Social



Fig. 3

The *Lugar de la Memoria, la Tolerancia y la Inclusión Social,* in Lima, Peru, a project of the Peruvian architects of Barclay & Crousse (Sandra Barclay and Jean Pierre Crousse). Inaugurated in 2015, it portrays the armed conflict in Peru where the *Sendero Luminoso* and *Movimento Revolucionário*

Túpac Amaru (MRTA) groups confronted the Peruvian state and, according to the Truth and Reconciliation Commission, seventy thousand people were killed between 1980 and 2000. The main victims were farmers and indigenous people, mostly in rural areas, exposing the racism, social and economic marginalization of these people (QUIJANO, 2005).

Considering the exercise of memory as the central piece for the reconstruction of a country, we sought to find the origin of internal conflict and from this point, reflection and dialogue that would allow an inclusive narrative for all Peruvians (UNZUETA; JARA, 2015). The objectives of the museum are to shelter the history of what happened in the period, giving importance to the causes of violence, recognizing minorities and the cultural diversity of the country, being a space for reflection and popular participation. The stories of the victims and their families are highlighted in the narrative presentation of the facts.

The museum has as its starting point the reconstruction of part of the mountain chain, uncharacterized in the 1970s for the construction of a link between the highway by the sea and the city. A network of paths takes pedestrians coming from the city that is located in the upper part, to the sea in the lower part, in a route of two hundred meters and a drop of twenty meters. The main volume of the building turns its openings to the part near the mountains, the sunlight is reflected diffusely into the museum through the slopes. To the other side, facing a square, the direct rays of the sun and the noises of the expressway, the museum filters the light that enters through small openings (BARCLAY; CROUSSE, 2010). On the roof, there are concrete ducts that pierce the slab and like flashlights, bring light to the interior. Those at the top can use these ducts as if they were lunettes to observe the exhibition on the floor below. The landscape and the territory are very present in the architecture of the museum.

The access to the museum for those coming from the city, which is in the upper part of the grounds, is only possible on foot (Fig.3 - 1). The floor of the entrance reads "here are not found any of the 13,721 disappeared registered during the internal war in Peru 1980-2000", it is a museum that seeks to show the facts from immaterial memory. We find a fork in the way, in what seems to be the secondary there is a gentle ramp where it is possible to see the sea and the green coast. From this point, there is an elevator where it is possible to go down and access the museum entrance. The main path leads to a staircase that as we descend, the city is left behind and we enter a valley between the museum and the slope (Fig.3 - 2). You reach a landing and from it, you can see the sea in the background. The same stones that form the slope are also part of the facade and floor of the museum. A shaded path between the museum and the mountain and all the openings in the building face the slope (Fig.3 - 3). On the other side, there is a square, which can be accessed by car or from the lower part of the city by the sea. To this side the museum is all closed, protecting the interior from the noise of the avenue and direct sunlight. The route in the expositive areas occurs through ramps in an ascending way ending in a belvedere with a view to the sea. From there, the path continues through ramps to the city or through an elevator that in the lower part takes us to the sea (BARCLAY; CROUSSE, 2010).

Centro de Memória, Paz y Reconciliación



Fig. 4

The *Centro de Memória, Paz y Reconciliación* located in Bogotá, Colombia, a project by Colombian architect Juan Pablo Ortiz, inaugurated in 2012, is located in the Reconciliation Park, within the Central Cemetery of Bogotá. Space was proposed for the celebration of the 200th anniversary of the country's independence, planned for reflection on the causes of violence in Colombia's armed conflicts, recognition of the victims of these conflicts, and promotion of the culture of peace (MORA, 2013).

The land chosen is located in a historic area of the city, within the Central Cemetery and next to the El Renacimiento metropolitan park. For its construction, excavations have been carried out and thus some 3000 bodies of people have been discovered and exhumed as anonymous. As a design strategy, the building was oriented orthogonal, according to the cardinal points. The needs program of the building was organized so that the exhibition rooms, library, auditorium, and services, were located underground and only one volume could be seen in the landscape to house the Memorial of Life, a symbolic space created from popular demand, not proposed in the contest notice (ORTIZ, 2012).

Taking into account that the dispute for the land is presented as one of the points of origin of conflicts in the country, two main actions were proposed during the process of building the Memory Center. One related to the social issues of reconciliation of several groups of victims, and the other related to the memory of the events of violence and pain that occurred. For reconciliation, ceremonies were organized during the construction of the building, calling different groups of victims to bring back portions of the land in conflict. About 2000 portions of land were made available and stored in glass tubes, which would be incorporated into the construction of the museum. The action of memory was the construction of a space built on land, which could house the different portions of land in dispute collected (ACDVPR, 2015, p.48).

The main volume was proposed to house the Memorial of Life, this, as well as the soil excavated for the exhumation of the bodies, would be constituted in strata, layers that could represent the 200-year history of Colombia's independence from 1810 to 2010. A technique inspired in the colonial buildings in *taipa* was used, from the compression of earth between wooden forms. This technique was modernized, and from trials, it was possible to mix 90% inorganic earth and 10% cement, which presents great resistance to the action of winds, rain, and earthquakes (ORTIZ, 2012).

The main hall that concentrates and distributes the circulation in the building, gains a prominent role in the whole, either for its symbolic issues or its dimensions. The thicknesses of the walls, as they are

basically ground, have a dimension of 1.5 meters. In height, every 60 centimeters represents ten years of history, totaling twenty layers, therefore 12 meters of history. One hundred openings are distributed on the façade as a diagram of violent deaths, in relation to the months and years. Glass tubes with the portions of earth collected, were deposited in the holes left by the removal of the molds from the construction.

Entering Reconciliation Park, it is possible to see a large volume of constructed land. A wooden path leads us to the main volume and for that, we pass between water mirrors (Fig.4 - 1). A staircase leads us underground, and what is impressive is the width of the walls and the height of the space, with a series of regular openings distributed in the walls that let in the daylight making a light and shadow effect in the space. Two symmetrical volumes with a patio between them, start from the main hall housing the museum program (Fig.4 - 2). The idea of reflection on glass facades, paths, and ceilings surrounded by water mirrors (Fig.4 - 3), is reflected in the museum's program with its spaces for discussion, conflict resolution, meetings, classes, and workshops.

Final Consideration

In contrast to 19th-century museums that find in the palaces typology the appropriate space for the exhibition of the accumulation of material objects at the discretion of curators, memory museums seek interaction with society in the public space, based on the reports of the victims of the various conflicts and the interaction of the body in space, represents a moment of valorization of human rights, making cities more just and representative. The Latin American approach adopts the valuation of education as a strategy, the result of the organization of the state, participation of the population, and entities representing the victims. Among the strategies adopted in its conception, are the creation of access routes at a lower level than that of the city. The elements found in this route are narrowing, openings, shading, clarity, silence, noise, reflections, opacity, names of victims, works of art, gardens, and water mirrors. Within the buildings, the connection with the city is reestablished from new points of view, viewpoints, openings, and transparent facades. In some moments, that what is portrayed in the museum and the views of the city even overlap and mix. There is an appreciation of identity in the choice of representative materials, in the reading of the territory, in the appreciation of history, and connections with the city. The use of transparencies and the filter of natural light that enters the buildings are strategies for museums to be the continuation of urban life and to represent society in a broadway. They are spaces of interaction for the formation of an active memory about the moments of pain and violation of human rights, spaces that bring information and reflection to users.

Image Captions

Fig. 1. Latin America map indicating the cities where memory museums are located. Photos and map: Personal collection of the author of the text.1-*Museo Memória y Tolerância* in Mexico City. 2- *Museo Casa de la Memória* in Medellín, Colombia. 3- *Centro de Memória, Paz y Reconciliacíon* in Bogotá, Colombia. 4- *Lugar de la Memória, Tolerância y la Inclusión* in Lima, Peru. 5- *Museo de la Memoria y los Derechos Humanos* in Santiago, Chile. 6 - *Parque de la Memoria* in Buenos Aires, Argentina.

Fig. 2. Routes through the *Museo de la Memoria y los Derechos Humanos*. Photos: personal collection of the author of the text. Section: <figueroa.arq.br>

Fig. 3. Routes through the *Lugar de la Memória, Tolerância y la Inclusión*. Photos: personal collection of the author of the text. Section: *Barclay&Crousse* collection.

Fig. 4. Routes through the *Centro de Memória, Paz y Reconciliacíon*. Photos: personal collection of the author of the text. Section: <*juanpabloortiz.co*>

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Two design solutions in Lisbon around a rail overpass and the riverfront:
a comparison of MAAT and the National Coach Museum

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Abstract

The two museums that are the subject of this article, the National Coach Museum (Paulo Mendes da Rocha, 2015) and the MAAT - Museum of Art, Architecture, and Technology (Amanda Levete, 2015), both located in the Belém area in Lisbon, are inserted in similar urban contexts. The first, on one side of a large square-headed by the presidential palace, and the second, on the riverside, next to Central Tejo. In both, there is the intention to surmount the same railway and avenue that constitute barriers between the city and the river.
While the Coach Museum presents itself as a result of the thought of the Escola Paulista in the 1950s, explicit in the valorization of the structure as a characterizer of the shape and the use of pilotis, the MAAT is a work of the 21st century, with the formal fluidity creating a new topography, allowing from the implantation level to access walkable rooftop terrace.
Although the solutions chosen are different from each other in terms of morphology, it is possible to establish project analogies, through the answer given by the architects to the urban context in which they intervened.
In this way, the comparative method used for the two buildings consists of analyzing characteristics in their relationship with (a) heritage architectural pre-existing and urban spaces of the surroundings, (b) views from the buildings to the Tagus River, (c) solutions of the railroad overpass with footbridges and its relationship with the respective buildings, (d) creation of public areas provided directly by the buildings - such as covered transition spaces - or adjacent to the buildings.
This critical analysis will provide an overview of the positive and negative aspects of each architectural solution adopted according to the criteria described above, seeking to contribute to a more conscious architectural production.

Keywords: Building comparison MAAT, National Coach Museum, Lisbon waterfront, Belém neighborhood.

1. Introduction

The comparative method, widely used in the applied sciences of Biology, is one of the bases for the construction of knowledge in these domains of knowledge and has an important role in their practical use. This method consists of cataloging similarities and differences between organisms. The versatility of the comparative method also serves for the eternal debate involving the architect's production, divided into the binomial art or science, with valid arguments for the two adjectives, which sometimes ends up situating architecture as a hybrid of both. Regardless of the taxonomy in which the architecture is placed, this in no way affects the use of the comparative method as a tool for understanding it, since it is inexorably within the scope of knowledge that allows comparisons with methodological rigor: “It may, perhaps, be doubted if art or architecture can properly be called sciences, but it is quite unnecessary to raise the question; anything that can be treated historically and descriptively, as art may in all its branches, can also be studied comparatively.”[1]
To obtain rigorous comparative studies, the subjectivity of architectural creation, directly linked to the mind of its creator, must be set aside, and careful analysis must be based on objective constraints that rule any architectural project. This is a design process that the architect must face to offer a materialized final result.
In this sense, there is a clear split between art and architecture, the latter being closer to a scientific process governed by choices to be made in the face of concrete problems. If, on the one hand, this process prevents creation from being free, on the other hand, it demonstrates creativity as a result of how to deal with this constraints[2].
Thus, through the adoption of these limitations as a common starting point for any project, it is possible to draw an analogy with the experimental method used in Biology, in which the architectural project itself is a laboratory of experiences. The comparative method of two or more objects, which start from common constraints - and which in turn present materialized responses in their architectural shapes on how to deal with and resolve these limitations - allows their careful analysis. At the end of the process, more important than a catalog of solutions, a critical position is obtained because of the diversity that the solutions tested in the experiment offer. This was the method used for the two buildings analyzed in this article, which although differ in terms of formal and technological solutions, deal with the same basic constraints: the transposition of the railroad and the relationship with the river located close to them.
The most recent work, MAAT, a project by Amanda Levete opened in 2016, uses a formal concept developed mainly in the 1990s, first called Blob architecture[3], this nomenclature having recently been superseded by the term Parametricism[4]. The second building, the Coach Museum, by Paulo Mendes da Rocha, opened in 2015 and has a process of articulation and formal construction called Brutalism of Escola Paulista[5], with origins dating back to the 1950s.

2. Views from the buildings to Tagus River and creation of public areas

The location of the Coach Museum and the MAAT, although in both cases they present themselves with unimpeded views towards Tagus River, have differences regarding the distance to the water. At the Coach Museum, the closest point is 70 m from the bank, consisting of the footbridge, while in the MAAT, this distance is 13 meters, which corresponds to its viewpoint (Fig. 1).
Regarding the characterization of the type of public space in each building that has a relationship with the Tagus River, there are substantial differences in the two examples. At MAAT this space is mainly at the top of the structure, while at the Coach Museum it is on the footbridge that crosses the railway. In turn, MAAT's footbridge has little emphasis on views of the river, while at the Coach Museum it is the free space adjacent to the building, and underneath it, which has no visual relationship with the river. However, their footbridges and main open spaces are interconnected in both museums, so that analyzing the two in isolation would be mistaken, and the joint analysis of it, considering their directly related spaces is more contributory.
The river view from the Coach Museum takes place on the footbridge perpendicular to the Tagus, on the museum-park direction, with the railway line located between the two points. This vector is important because it is when the user is facing the water. The straight path of the footbridge (this, an element that will be analyzed later in a specific topic) provides a gradual approach to the free landscape of the riverfront, which becomes increasingly closer and more detailed to the user, as the path reaches its point of change of direction, which is also the closest one to the water. From here, the descent takes place on several ramps, which end the entire circulation path as it reaches the park. The architecture on this route provides the view as a result of the need to cross the railway line, so that, at no point, there is a differentiated space for the pause of contemplation. The aforementioned point of change of direction, which would be the place of excellence for such an activity, is designed without differentiation that could allow leaving the area of influence of the corridor of the circulation zone (Fig. 4).
In the MAAT, the view over the Tagus River is directly connected to its wavy walkable roof, which is also the point of confluence of several routes, not only the footbridge but also the paths along the

Tagus banks and the access to the garden behind the old Central Tejo, a garden that extends practically to the entrance to the Coach Museum footbridge.
The geometry of the roof provides that only the highest point faces the river, and contrasts with the rest of it, which has a decreasing slope as it approaches Avenida da Índia on the opposite side.
This contrast in the ascending and descending form of the roof is responsible for creating the surprise that occurs when the user reaches the top and leans over the railing, where the Tagus River, the 25 April Bridge, and the sea come with a 180º panoramic view. Since, no matter where the access to the roof started, this panoramic view is only revealed in the last steps. Until this climax, there is an expectation in the act of leaving the interference that is the building itself - which at this moment blocks the view of the river - and discovering the new landscape after climbing it (Fig. 3).
The project gesture seen here demonstrates a sensitivity that refers to the belvederes existing in the hills of Lisbon, appearing unexpectedly in the urban fabric. This is a characteristic of the city that MAAT's architect highlighted when mentioning: "The geography of the place is beguiling: those seven hills reveal dramatic views at every street corner, the Tagus estuary promises so much and you can see the line at which the river becomes the ocean."[6]
It's perceived that the design gestures that define the building's shape were mainly aimed at creating this roof, a kind of built topography. The fact that below it exists 3000 square meters of space dedicated to art, architecture, and technology is a secondary factor, even though the client's request, from EDP (Energias de Portugal), was for a museum. This is not a negative criticism, on the contrary, it is the appreciation of an opportunity that this urban location offered and that was fully explored.
In addition to work as a belvedere, the roof also intrinsically provides the building's contribution to the addition of new areas for public enjoyment, with the ambivalence of facing the river, but also serving as a grandstand for the city on the opposite side[7].
The use of this space by the users could be verified by the author in observations where people sat on the floor to observe the city or stood on the railing facing the river, taking selfies with their phones. However, there is an absence of people staying for a prolonged period at the top of the belvedere overlooking the river, mostly because of the lack of benches or similar objects. Exactly the opposite of this situation occurs in the part facing the city, where the steps work as benches.
The prolonged use for contemplating the view of the Tagus River occurs in the ground level of the museum, on other steps that exist between the acute-angled part of the tiled surface of the facade and the promenade floor, and also on the steps ahead, on top of the slope that connects the promenade parallel to the river with the waterline.
While in MAAT its shape vertically deforms the flat plan of the terrain to maintain this as an area of public enjoyment, and below it creates the museum space, the Coach Museum has an exact opposite procedure.
Here, its suspended volumes raised by pilotis aim for keeping the original terrain plan and therefore intended that the space below the building becomes public space.
The direct comparison between the two solutions in terms of promoting new spaces for public enjoyment is difficult to be carried out with strict criteria regarding the formal choice itself, however, ignoring the antagonistic spatial conformation between the two buildings, we can use the criterion of observation of the use of public space by people and thus make a critical analysis. After all, when speaking of public spaces, we are referring to something that only acquires this function if it is enjoyed by the inhabitants, otherwise, it becomes just an empty place with unobstructed access. In the same way, if a building intends to be a provider of public spaces with dynamic use and fails in its objective, it has problems in relating to the surroundings and presents a deficient architectural solution given the limitations that the place demanded.
Under this concept, through the observations made by the author, in the Coach Museum, it was demonstrated that the use of the spaces below and between the suspended volumes of the museum were scarce compared to the circulation that occurred in its perimeter, on the faces of the museum facing adjacent streets.
The crossing possibilities that occur between Rua da Junqueira and Avenida da Índia between the buildings - which could work as a shortcut for some paths - are little explored by users.
In addition to the fact that the crossing route is practically non-existent, the contemplation route is even more scarce, partly due to the existence of few benches. In both types of use, circulation, and contemplation, however, one cannot ignore the lack of stimulating accesses from the sidewalk next to the two streets aforementioned to the beginning of the space located between the museum volumes.
In Rua da Junqueira, this access is done by a narrow staircase that goes down to the level where the pilotis are grounded. At the sidewalk, the height difference between these two levels is protected by reinforced concrete guardrails that visually hide the space that unfolds ahead.

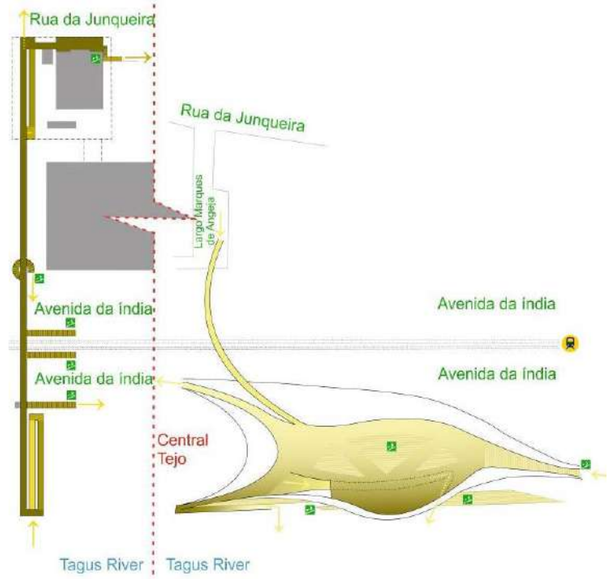




Fig. 1

Associated with this, the background figure of the open space ahead in this view reveals part of the white monolithic volume of one of the wings of the museum, which is read as a blind facade. This type of architectural image is poor in capturing the user's interest, as verified in a study using eye-tracking[8].
In the access from the opposite side, through Avenida da Índia towards Junqueira, the main access is below one of the museum's volumes, between the entrance and the respective store on one side, and the ticket office on the other. The transition between the sidewalk and the covered space under the monolithic volume is generous and without visual barriers, with the diagonal wall of the ticket office creating a growing geometry that invites the user to explore the open space that is just ahead.
Even so, this access, which qualitatively is the opposite of access via Rua da Junqueira, due to its large urban scale and subtle expanding shape, is not sufficient to cause a dynamic of use to the open space between the two museums volumes.
So far we have analyzed two of the main accesses to the public area between the museum volumes in an attempt to obtain information that reveals its little use.

Now strictly analyzing this area, few elements justify its use as a space for contemplation. In addition to the aforementioned small number of benches, and except for the museum store entrance, surrounded by a glass wall, there is a lack of surrounding spaces that could provide permanent dynamic activities.
This last statement translates into practice in opaque membranes turned into the public area, in general, characterized as walls, and opaque gates and service doors that accommodate specific activities of the museum where the public is not allowed to get in[9].
These generic elements, combined with the concrete retaining walls that make the transition between the level of Rua da Junqueira to the level of the public area of the museum, do not contribute to the creation of dynamic use nor of exceptional spaces.
Plus, the rear facades of the XVIII and XIX buildings facing Junqueira are left exposed to the public area, adding no contribution at all.
All this hostile environment is an effect of the building's creative process, where architect Paulo Mendes da Rocha privileged the museum's functional program as an object closed in itself and released on a continuous and infinite flat surface. The sketch model demonstrates this statement unequivocally by completely ignoring the built environment of Rua da Junqueira (Fig. 2).
This way, the importance of the border between the museum volumes and the immediate surroundings were secondary in the process, resulting in a disconnected place from the building, a kind of residual space (Fig. 2).



Fig. 2

3. Footbridge over the railway and its relationship with their respective buildings

The elevated footbridge crossing the Lisbon - Cascais railway is characterized as an approaching path to the museums, as well as a pedestrian connection between the dense consolidated Belem neighborhood and its riverfront.
The difference and importance of this access compared to other forms of access to buildings is its imposing character since it “tapers” in a small portion of the area the demand for crossing. Its function, therefore, is equivalent to that of a bridge connecting two banks. This function of unifying two urban spaces fractured by the railway line makes the function of this structure independent in itself. However, its existence is due to the initiative of building the two museums. Thus, the expected result is the existence of a cohesive relationship between the museums and their respective footbridges.
Although neither in the MAAT nor in the Coach Museum the typological idea of a bridge was put aside, in the sense that the solution adopted for both was composed of a continuous and parallel corridor board, there are significant differences in the way this corridor develops, and especially, how it relates to both their respective buildings and the opposite side beyond the railroad.
In the MAAT, the most extreme side of the footbridge is next to the first section of Largo Marquês de Angeja, a narrow and tortuous street where the homonymous palace, built in the 18th century, is located. The access to the footbridge starts at one of the angles of this street, entering a few meters into it. If, on the one hand, the conventional, discreet and discontinuous aspect with the existing pavement manages to hide the topographic surprise that occurs a few meters ahead at the museum, at the same time this simple “landing” ignores a series of possibilities for integration with the design of the urban layout and creation of contemplative sites to take advantage of the elevated view of Avenida da Índia and Central Tejo (Fig. 3). The mentioned abrupt end/beginning of the footbridge contrasts with the sensitivity of the museum’s transition in front of the Tagus promenade, where it is smooth and almost imperceptible with the pre-existing floor.
130 meters ahead, the footbridge joins the viewpoint previously analyzed, from where a series of possible paths for the riverside level begins, in the East-West directions, in a wide and continuous space, but never a predictable one - the floor's curvature makes that these paths only reveals itself as a whole when the user approaches it.
This type of space is, therefore, able to combine, without recourse to obvious route design, the easy reading of the whole space, in line with what Kevin Lynch stated when referring that “the line of motion should have clarity of direction. The human-computer is disturbed by long successions of turnings.”[10]
The joint footbridge-viewpoint ends up being diluted by the fact that both the MAAT roof and the

footbridge are dominated by the curved lines, however, in details such as the type of floor used - different from the building roof - and the parallelism of the footbridge never made it clear whether it is an intrinsic element to the museum or an annex, without the same importance as the dominant shape of the building.
The suspicion of being an annex ends up being confirmed by looking at the original model of the project, where the footbridge does not appear since it was a client's ask made in 2013, two years after the initial project was presented[11].
Regarding the walking experience in the footbridge itself, this offers different levels of stimulation depending on the walking vector. From the museum viewpoint towards Angeja, the design of the footbridge causes little curiosity for its crossing.
From the opposite direction, although the integration of the footbridge with the preexistent site lacks sensibility and shows some roughness, the crossing journey offers a remarkable phenomenological experience. This is caused by the curvature that first induces the gaze on the Central Tejo and gently guides it towards the artificial topography of the museum that emerges a few steps ahead (Fig. 3).

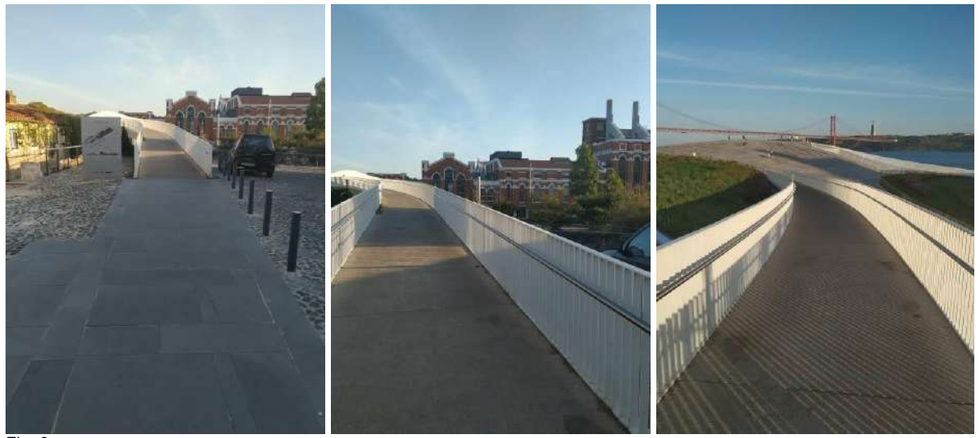


Fig. 3

Before going to the analysis of the Coach Museum, it is important to emphasize that the relation between its footbridge and the building is reversed when compared to the implantation seen in the work of Amanda Levete.
In other words, the main access of this footbridge is located in the area closer to the river, while the building to which it connects is on the opposite side of the railway line. This difference is essential, since the level difference corresponds to this part, the opposite situation that happens at MAAT's footbridge.
The route to reach the footbridge, which is elevated 7 meters above the ground, can take place via a long staircase in an area close to Avenida da Índia, an elevator in front of this staircase, or through a succession of ramps located at the footbridge's end.
These ramps, located in an open area, form a mechanical and repetitive path parallel to the footbridge, where the only differences that occur until reaching the top, or from the top to the bottom, are the differences in levels as it is covered. This creates, in general, a feeling of walking and not leaving the place, since the same views, with slight differences, are visualized several times (Fig. 4).
In the same way that MAAT's footbridge, combined with the viewpoint atop the museum, serves as an articulator of several path options, the same function occurs with the linear footbridge of the Coach Museum. This provides access to the Lisbon-Cascais train station, and further on to the ground level, in front of the museum's café, through a spiral staircase that stands out for its contrasting shape with the other stairs of the route.
At the opposite end of the footbridge, close to Rua da Junqueira and the old Picadeiro Real, there is a transition, as the footbridge transforms into a ramp scheme similar to the one at the other edge of the footbridge.
At this point, the footbridge is located under the elevated volume of one of the museum's blocks, which contributes to providing a sensory experience that contrasts with the opposite side.



Fig.4

Still, as for the footbridge seen as a whole, there is a loss of scale along its 220 meters[12]. If, on the one hand, Paulo Mendes da Rocha's constant use of walkways works well when it is small in size, seen in buildings such as Loja Forma (São Paulo, 1987), and the Pinacoteca do Estado (São Paulo, 1993), the simple “stretching” of the element on the urban scale that characterizes the Belém building is problematic due to its long length causing a monotonous path:

> A regularly shaped road or corridor is seen as converging in the distance ahead. (...). Yet, paradoxically, that convergence remains at the same distance. It never comes closer but offers instead an unchanging image, a visual standstill, which contradicts the walker's or driver's sensation of moving forward. All this adds up to a subtly frustrating experience (…) [13]

In the intellectual and aesthetic premise of keeping the purity of the footbridge's shape intact - as an architectural object independent of the rest of the building - it ends up becoming rigid in potential relationships with the other wings and spaces that make up the two volumes of the Coach Museum.
This project approach is recurrent in Paulo Mendes da Rocha's projects, as the architect explained in a presentation for his proposal of USP's Museum Square (São Paulo, 2000), where a similar footbridge - which he called elevated street - has an important role in defining the spatial configuration, just like the Coach Museum:

> These museums are on one side and the other on the elevated street; I enter the museum and naturally, as the street is free from the main volumes, I enter through a small passage that looks like a little neck, to detach itself from the building. (...). Neither of these volumes can touch the other. They must be autonomous, connected by delicate structures, evidently covered, like small bridges.[14]

The “little neck”, an allusion of the architect to the thinning observed in some mammals, also appears in the Coach Museum, connecting the footbridge's end to a secondary path leading to Rua da Junqueira (Fig. 4).
This place also corresponds to the end of the footbridge and its transformation in two ramp flights reaching the sidewalk level. This important node where the option to choose a path other than descending the ramps, is read, due to the “little neck”, as being of secondary importance in comparison with the ramps[15].
This way, there is no idea of an intersection, but of a junction, which conditions the choice of the route with the prevalence of one over the other, and therefore leads to the absence of an equal choice by the user of which route to follow. Kevin Lynch stated the importance of an easy understanding of path geometries like this: “The strategic point in such a set is the intersection, the point of connection and decision for the man in motion. If this can be visualized clearly, if the intersection itself makes a vivid image and if the lie of the two paths with respect to each other is clearly expressed, then the observer can build a satisfactory structure.”[16]
In an attempt to circumvent this contradiction, between the idealized autonomous form of the parts with the whole, and the desired path function, the architect tries to mitigate the adverse effect with the use of the same type of railing found on the ramps and footbridge in the "little neck" path, in an attempt to unite the elements.
However, a prolonged observation by the author[17] to the journeys made by the users of the footbridge confirms the initially predicted, that the use of the route after the “little neck” is limited, even by users

who, after going down the ramp, go to Rua da Junqueira towards Baixa - a route that would be shorter if they used the path after the "little neck". In the opposite direction, from Rua da Junqueira sidewalk to the footbridge, the discreet access without urban scale that starts from the space delimited by the Coach Museum and the side of a Pombaline building, combined with its continuation through a stair hidden by the concrete pillar that supports the museum's volume, contributes little to its use by pedestrians who are not familiar with the path (Fig. 4).
This access, mistakenly discreet and devoid of generous dimensions, is contradictory with the intention of the rest of the path, directly facing Rua da Junqueira, encompassing the auditorium until it meets the footbridge.
In short, the labyrinthine and unclear entrance to this access goes against the supposed permeability that this route system intends to have, so that, as Rudolph Arnheim stated: “(...) any deviation from the course is an impediment. Movement tends to straighten the course and eliminate deviations. This is true also for the mental images of spatial connections based on motor experiences. In recalling city layouts one tends to overlook bends that complicate the overall direction of a street or route.”[18]

4. Heritage architectural pre-existing and urban spaces of the surroundings
Regarding materiality and its capacity for a communicative link in creating visual relations with the history of architecture, there are considerable differences between the two museums. The Coach Museum uses the pink color in its auditorium block facing Rua da Junqueira that echoes the plaster of the old Picadeiro Real, the museum's former headquarters. The auditorium's shyness towards the huge exposed reinforced concrete structure that surrounds it hides this subtlety. However, probably purely accidental, this same structure ends up creating a relationship with the stone cornices and corner pilasters that enclose the pink plaster of old Picadeiro (Fig. 4).


Fig.5

In MAAT, the relationship provided by materiality is not direct and occurs through the element that covers the facade facing the Tagus and constitutes its skin. This is composed of glazed ceramic panels that symbolize the Portuguese tile tradition through a contemporary reinterpretation of them. In this sense, it is not directly related to any building in the surroundings, but generically with a cultural element present in Portuguese cities, the tiles mosaic. This link, both materially and historically, is not easy to perceive, given the discrepancy between the inspiring element and the result inspired by the first.
Regarding the volumetry, MAAT’s horizontality in comparison with the adjacent Central Tejo achieves the effect of taking center stage to the first and allowing the second greater prominence, since this is primarily vertical. The horizontality also provides the viewpoint, a reinterpretation of old Lisbon's "miradouros" above the city hills (Fig. 5).
At the Coach Museum, the volumetry seen from the outside does not relate to the size of any surrounding building, being excessively higher. However, the path on the footbridge in the vector Tagus riverside to Rua da Junqueira allows a view where the top of the buildings on this street is aligned with the bottom of the suspended volume of reinforced concrete that surrounds the auditorium.

The formal conformation of certain geometries of the two buildings to relate them to important historical pre-existence structures is visible in both museums.
A large visual axis, in the East-West direction, is formed between the two volumes of Coach Museum, leading to a controlled perspective towards Afonso de Albuquerque's monument (Fig. 5).
The importance of this perspective for the museum is of such importance that it served as a basic definer element for the placement of its two blocks within the plot.
This axis contrasts with another existing at the same monument, in the North-South direction, centralized around the Palace of Belém.
Overall, the museum's axis validates the monument as a central piece of a set of important buildings in the vicinity.
In MAAT, a similar heritage relationship is visible in the use of the ellipse surrounding Central Tejo, suggesting a deformation of the geometry of the roof to enhance the pre-existence, which creates the effect of two forces in tension[19].
However, this same sensitivity is lacking for the building of Cordoaria Nacional, completed in 1779 and located about 100 meters away, on the opposite side of the railway line. When inserting the parking lot facing this building, at the same time that the museum's facade facing this parking lot and Avenida da Índia has an airtight character with the outside environment, there is a suggestion that it is a place of secondary importance within the overall museum's structure.

5. Conclusions

Through this analysis, it is concluded that MAAT's public spaces are capable of providing more activities that generate urban life than the Coach Museum's. Although the typologies of their footbridges are similar, the way they relate to the immediate public space provided by their respective museums are largely different.
In MAAT the bridge is only a small appendage of a large system of connected public spaces, while in the Coach Museum the typological rigidity of the bridge avoids a merging of this with the adjacent spaces.
The fact that both buildings have different formal and technological foundations, including chronologically, is of relevant importance for the quality of MAAT's public spaces, although it is not defining its quality. Above all, and in a diagrammatic way, it is the correct articulation building-site-public space the main cause of its use dynamism.
At the Coach Museum, the priority given to the functionalist approach of the volumes that correspond to the museum's program, are rigid and hostage of pure cubic shapes, making the unique opportunities that the surroundings offered being largely ignored.
Regarding the relationship between the heritage buildings, the comparison is more difficult to reach consensus. MAAT's great contribution is its reinterpretation of Lisbon's viewpoints, while at the Coach Museum the adoption of the axial view between the two volumes allows a new view of Afonso de Albuquerque's monument.

Notes

1 Ferree, "Comparative", 5-6.
2 "Architecture, however, is of all arts the least imaginative; it is concerned with practical questions, with the environment, with geological structure, with climate, with local conditions, with materials, with the special uses to which its products are to be put. The imagination of the architect is constantly hampered by limitations that do not affect the painter or the sculptor. It thus offers material for comparative treatment not possessed by other forms of art." (Ferree, 6.)
3 Lynn, "Blobs", 58-61.
4 Schumaker, "Parametricism", 14-23.
5 Zein, "Brutalismo", 6-31.
6 Levete, "Town", 76.
7 "In Lisbon, we designed the roof of the Museum of Art, Architecture and Technology (MAAT), as a new public square in the city, like an outdoor room. It has become a social place of intersections and conversations across thresholds, one that people can pass through or just be in; a place visitors can use and program in the way they want. It gives them a new perspective as they look back towards the old city or out towards the Tagus on the threshold between the city and the river." (Levete, "Celebrate.")
8 Sussman, Ward, "Game."
9 This type of hostile relationship between architecture and the public space was largely denounced by Jane Jacobs in the 1960s: "There must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street equipped to handle strangers and to ensure the safety of both residents and strangers must be oriented to the street. They cannot turn their backs or blank sides on it and leave it blind." (Jacobs, *Death*, 35.)
10 Lynch, *Image*, 96.
11 Ramires, "Centro."
12 This measure refers to the linear path of the footbridge. Counting the ramp flights on both sides, the total length reaches 400 meters.
13 Arnheim, *Dynamics*, 155.
14 Mendes da Rocha, *Maquetes*, 38-39, author's translation)
15 It is an undesirable situation for a public building, where this geometry inhibits its use by users, contrary to the concept that "when projecting more than one path, then the path intersection becomes vital since it is the point of decision." (Lynch, *Image*, 57.)
16 Lynch, *Image*, 98.
17 The author was in the area in front of the auditorium entrance and observed, for an hour, the pedestrian flow.
18 Arnheim, *Dynamics*, 152-153.
19 "Dynamically, the vectors issuing from the inside of the dominant figures press upon the contours and try to make them expand into the surrounding space. If this expansive power goes unchecked, the figure lacks definition and floats. Its boundaries acquire perceptual stability only when the internal pressure is balanced by a counterpressure from the outside, that is, by vectors issuing from the negative interspaces. The apparent stillness of the contours reveals itself to the more sensitive eye as the result of pressure and counterpressure." (Arnheim, 70-71.)

Image Captions

Fig. 1. Left. Diagram showing the footbridge paths of both Coach Museum and MAAT and their relationship with the river and main roads. The green square indicates stairs. Source: author. Right. Satellite view of both museums. Source: google earth.
Fig. 2. Left. Sketch model for the Coach Museum. Source: https://www.archdaily.com.br/br/767363/museu-dos-coches-paulo-mendes-da-rocha-mmbb-arquitetos-bak-gordon-arquitectos .Right. Aerial view of Coach Museum and its immediate surroundings. Source: https://aasarchitecture.com/2015/06/national-carriages-museum-by-paulo-mendes-da-rocha-mmbb-arquitetos-bak-gordon-arquitectos.html/
Fig. 3. Left. MAAT's footbridge access at Largo Marques de Angeja. Center. The same footbridge halfway, overlooking Central Tejo. Right. The footbridge approaching the ending, with a view towards the viewpoint. Source: author
Fig. 4. Left. Coach Museum footbridge's ending near Tagus. Center. The same footbridge showing the "little neck" on the right. Right. The narrow entrance from Rua da Junqueira towards the auditorium and the path behind the column. Source: author
Fig. 5. Left. Axis view between Coach Museum volumes towards Afonso de Albuquerque monument. Source: author. Right. MAAT's viewpoint towards Tagus River and April 25 Bridge. Source: author.

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Nature and Reversed Mimesis in Toyo Ito's Architecture

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Abstract

The recent work of architect Toyo Ito has shown a change in the treatment of materiality towards the opacity of concrete walls, as seen in the National Theater of Taichung (2016). This change did not mean abandoning the search for transparency, which he associated with the spatial ambiguity generated by the interpenetration of inside and outside spaces as can be observed in his project for Sendai Mediatheque (2000). Transparency constituted a spatial device that could open the work to public participation without losing artistic autonomy. Ito associates the paradoxical opaque materiality and spatial transparency of the Taichung theater with the organic and abject reality of intestinal walls or uterus and, thus, announces a return to a kind of reversed mimesis and empathy. Rather than ordering nature by abstract geometrical order, geometry is subjected to the multiplicity of organic variables introduced in computer design programs, deforming the Cartesian grid of architectural plans, elevations, and sections.

The contrast between mimesis and abstraction could be considered overcome since the supposed crisis of the representative arts in favor of constructive and engaged in modern art and even Anti-art movements. However, we can observe the persistence of naturalistic realism references in modern and post-modern arts, which, like Ito's work, is dissociated from the search for beauty. The realism of contemporary art incorporates the avant-gardes experiences of strangeness and shock to involve the viewer in a participatory way. Through the concepts of empathy and abstraction, proposed by Wilhelm Worringer, this study seeks to interpret the meaning of the return to nature in Ito's work and its related impulse towards empathy involved in mimetic apprehension. It also indicates the need to rethink the worringerian pair itself, according to the existential conditions of the contemporary subject in relation with himself, the world, and the Other.

Keywords: Mimesis, Abstraction, participation, National Taichung Theater, Sendai Mediatheque.

1. Reversed mimesis.

1.1. Introduction

Toyo Ito's recent work has shown a change in the treatment of its materiality towards the opacity of concrete walls, which was only experienced in the White U residential project (1976). The National Theater of Taichung (2016) is an example of such opaque material strength. At the other extreme, stands the project for the Sendai Mediateque (2000), remarkable by the transparent and abstract lightness of the glassy and metallic surfaces. This change from Sendai to Taichung did not mean abandoning the search for transparency. Since transparency is not limited to materials but extends to the spatial ambiguity generated by the integration of interior and exterior, public and private space. The Mediateque was the result of the *"under construction architecture"* that involved the participation of the community from the base of the project to the flexible occupation of the building. Such openness did not imply the loss of the autonomy of architectural creation as a form. It supposed an empathic way of elaboration and apprehension. The deformation of the modernist Grid through the *"tree-like"* tube-structural elements triggers empathy and served to provoke the sensation of organic forms materiality and to give a sense of place to the spatial experience. The National Theater of Taichung brings such an injection of organic materiality from the structure to the facade and floor elements that gain strength expressivity through the use of concrete. Ito describes the journey from Sendai to Taichung as part of his own oscillatory movement between beauty and strength; geometric reason and body. The return to corporal materiality, however, does not suppose the anthropomorphic basis of classical architecture, but the primitive image of the cave *"that is, a space that resembles the mother's womb."* [1] Ito proposes a type of reversed mimesis that does not take the ideal of nature or the geometrical order as models. Rather than ordering nature by geometrical order, geometry is subjected to the multiplicity of organic variables introduced in computer design programs, deforming the Cartesian grid of architectural plans, elevations, and sections. It is also from the confrontation between mutant bodies and reality that Ito describes the return to nature. Although Ito's recent work has been associated with the abandonment of the initial abstraction, it cannot be considered that way. For him, the concept of abstraction is associated with both the idea of sacred and modern language. And the sacred is associated with inhabiting, being inseparable from architecture.

Through the concepts of empathy and abstraction, proposed by Wilhelm Worringer, this study seeks to interpret the meaning of the return to nature in Ito's work and its related urge towards empathy involved in mimetic apprehension. Worringer distinguishes the notion of nature from that of reality. Western culture has purged from reality that did not fit in the ideal of nature. This ideal was designed in the image and likeness of man. [2] In architecture, those abject remains from reality have been associated with haunted places, as *unheimlich*. [3] In the relationship between men, there is also an impasse between idealization and strangeness. The relationship between architects and the community is an example. For architect Riken Yamamoto, Sendai demonstrates Ito's openness to the Other. We will see how the reversed mimesis of Ito could be related to this opening.

1.2. Return to inorganic nature

Ito's criticism of the modern abstract Grid does not imply a return to mimesis, as it was characterized in the traditional narrative of Western art in its classical tendencies. [4] Classicisms were characterized by the notion of imitation of the supposed geometric rational order implicit in nature and represented figuratively. Geometric forms served as an ordering and stabilizing principle of organic reality, as they are opposed to their unstable qualities of change, movement, and depth of animal and plant bodies. The imitation mimesis presupposed, therefore, the opposition of the clear, rational, and stable geometric order of architecture to the chaos of the phenomenal world, according to an image of nature ordered by the static model of the Platonic World of Forms. Ito does not propose taking the static ideal of nature as a reference, but a return to its fluid order that takes as a model its process of change. [5] He proposes the recovery of the topological process of natural development by a "natural selection" (in the metaphorical sense) through computer simulations, whose variables assume the harmony of man with the natural and social environment in the very ecological-sustainable sense. *"Today we are able to create architecture based on the rules in the natural world by using computer technologies. However, we should use rules not to make forms that imitate nature but instead to create architecture that breathes and is congruous with the environment ".* [6]

Both purposes of imitating nature according to rational geometric principles of the ancients and of modern formal geometric-abstract treatment were based on the Euclidean static geometry of pure forms. The geometry that serves as the ordering principle of Ito's architecture mimics the world according to the logical complexity of fractals. [7] Fractal geometry, developed by computers, allows the complexity of corporeal and environment data to be interacted according to simulations that would not determine a solid geometric image. [8] The technology of computers also makes it possible to treat the calculation of each structural element in an autonomous way, in order to consider a non-

homogeneous variation. Deformations and geometric variety, in addition to topological operations, allows the analogy to the biodiversity of the natural world. [9] The design process is modified by the possibility of developing structure, facade surface, and interior space simultaneously through computer simulations.
Algorithmic simulations allow breaking the traditional hierarchical order between design and structural calculation, as well as between the spatial components themselves that become ambiguous. Internal walls can become facades and function structurally simultaneously. *Taichung Metropolitan Opera House* underwent such structural treatment in order to create *"maze-like continuums of three-dimensionally curved spaces"*. [10] Curved surfaces were derived from a basic geometric generative grid system that is flexibly repeated in a reversal manner horizontally e vertically. They form pairs of Catenoids that determine concrete tubes. Ito's idea was to integrate the path of the public park with the three theatres inside the building. The tubes were supposed to be continuous promenades that infiltrate it. *"The resulting façade consists of a box whose four sides and the top are cut off and the tube sections are exposed outside the box"*. [11] The outer and inner spaces and surfaces penetrate mutually. Ito makes an analogy between the openings of the architectural box with the human body, and between the promenades with a digestive tube, which has such ambiguity of interpenetrating outside and inside spaces. The digestive tube is an outer space that crosses the body from the mouth to the anus. *"Taichung was an attempt for an outside tube that pierces through the inside of architecture"*. [12] The return to nature promulgated by Ito breaks with the binary process of model and copy, according to the mimesis inherited from classical culture. Ito's mimesis reflects the development process of organic and inorganic nature. The references of an organic nature are taken up through fractal geometry, resulting in a figurative order with the ambiguous formal characteristics of variation and repetition.
Bataille associated the impulse to return to inorganic nature with the death drive. Surrealist artists were also involved in mimesis of regression that aimed to challenge the established symbolic and cultural order. The art of neo-avant-garde resumes the mimesis of regression and rethink the return to the inorganic in the contemporary context. The abject art mirror the tiredness and indifference of Generation X and grunge. [13] Substantial reality is considered traumatic for them. Ito considers that the loss of substantiality in the experience of the city occurred due to the weakening of interpersonal ties. The house lost its symbolic centrality. If the city configured according to the logic of market equivalence appears under the aegis of homogenization and alienation, then the city of the Digital Age is experienced as a reality neutralized by the excess of images. The torpor caused by the images would lead to the loss of bodily senses on behalf of the experience of the city as an abstract phenomenon that determines a disincarnated pleasure. *"More than being difficult to resist, it's a pleasant feeling of being detached from your own body"*. [14] Taichung offers a different proposition from this more abstract approach that was described in the 1990s. Ito intends to reinforce the experience of the real of corporal and architectural matter. Such real seems returns as abject, as something that was relegated towards the ideal of abstraction.



Fig.1



Fig. 2

1.3. Plato's mimesis and the non-ideal city image
Itoan's mimesis is characterized not by the return to nature via imitation of rational proportions, but through the ambiguity of the distortions of the Modern Grid and the induction of figurative imagery into structural elements. A type of reverse mimesis that shocks literal Platonists, as it violates the ultimate status of the rational and non-illusory copy of pure forms, the one that gave poets safe-conduct to remain in the Republic. For these literals, the problem of mimesis would be its misleading character, the impossibility of identifying the copy with the true and real being, resident of the World of Forms. For Platonists, nature is considered an image; and the artists, producers of images of the images of the world. The artistic image is either iconic when it faithfully repeats the ideal geometric proportions; or is a producer of simulacra, when it is only a partial reproduction of the real world. The philosophical problem of the image, therefore, lies in the recognition of the ambiguous status of the image. It can be thought of in the quality of its incompleteness of being in relation to the model and in the quality of what it is as similar; [15] which makes it possible to raise the issue of the reality of the image's own deformation. The deformed image shows the similarity with what it is not: form. It is in this sense that we can describe the itoan process of reverse mimesis. Ito recognizes the ambiguous status of the image as truth and simulacrum, as well as its widespread presence in the reality of the information society. Ito works the image as a banal element of the consumer society and as an idea of the image. It is at this critical threshold that he seeks to overcome the various dimensions of dualism that encircle contemporary man in his condition as alienated from life. It is important to recall Ito's criticism of utopian visionary architects, who intended to replace *"reality with a dream "* and also to " *destructive architects* ", Arata Isozaki and Kazuo Shinohara, who, in the context of the oil crisis in 1970 and the events of May of 1968, defended an introverted architecture that became *"its back on the city, and the miniature utopias suffused with criticism."* [16]
Ito's inaugural essay *"The logic of uselessness "* (1971) is a fiction set in the city of Tokyo. Portrays the hesitant condition of the architect urban-robot URBOT, who is torn between his affiliation to the antithetical tendencies of Charles Moore's pop vernacular architecture and technological utopianism and psychedelia of the architects of Archigram and Superstudio. *"According the former pursues connections with region and climate, and tries to re-establish contact with an untouched nature, the latter comprises science fiction-style depictions of the paradoxical utopias that emerge from an exacerbation of the information and materials with which modern society is saturated ".* [17] URBOT rejects, however, the nostalgic impulse to nature, as well as the utopian impulse for the future. Ito's work begins, therefore, with a critique of the city dominated by homogenizing and alienating high-tech architecture, to which the only significant answer, presented by URBOT, was that of "*intensifying uselessness"*. The expression of uselessness and dystopia, represented by the city of Tokyo, can be considered a reflection of the aporia placed by the critique of utopia. Utopia was associated with the practice of architects and the instrumentalization of Power, which would have resulted in alienation and rootlessness. *"Firstly, while URBOT advocates the negation of real conditions without leading to a simplistic focus on utopia, he wants his presence to manifest as a tangible shape in the real world."*[18]

2. Strategy of ambiguity: *the emergent duck*
The impasse between utopia and reality explains the tendency towards introversion in architecture that resulted in *White U's* (1976) aestheticism and sensual-abstract hermeticism. *White U* is not about a dematerialized abstraction. It departs from the contrast of two types of spaces, *Flow* and *Lag.* It already contains the ambiguity of the notions of abstraction and mimesis. The flow space in its tubular-curvilinear form corresponds to the flow of everyday life, while the resulting concentric space, to the

stagnation and introspection related to the ontological meaning of inhabiting. *“For me, however, the making of architecture is still the act of seeking the meaning of inhabitation, and so, at one step removed from everyday activity”.* [19] The two tubular and circular shapes resulted from the abstracted corporal-spatial experience of the profane and the sacred. The profane is related to the functionalist instrumentation of reality and the second, to the possibility of holistic experimentation. The formal elements of architecture abstracted from reality would constitute morphemes capable of transmitting the meaning of inhabiting as a suspension of the rhythm of urban reality on behalf of the rhythm of the composition of space. *"The curved surface is a morpheme that causes a variety of completely unanticipated outcomes."* [20] Neutral morphemes, such as various types of formal units of light and shadow, give rhythm and dynamism to fluid space and replace the literal division of space. They are memories and sensations of the bodily experience of the city. Neither the city nor nature serves as models of the house, but provide the symbols of Ito's urban semiotics. Ito’s semiotic approach is not contrary to the phenomenological one. [21] *White U*, however, would not allow the full experience of inhabiting because it does not provide collective appropriation, since it was not open to the city context. [22]The aim of the strategy of ambiguity was to open it to the collective.

To encourage collective appropriation, Ito proposed the development of an instrument based on what he called the ambiguity strategy. Such a strategy aims to destabilize the usual and homogenized sense of references in contemporary reality and open space for the experience of inhabiting. *“Rather than a discussion of functionality, there is a discussion of abstraction. Rather than a world of relativity, there is a world of ontology.”* [23] Ambiguity allows transposing the abstract hermeticism, which is restricted to the individual contemplative experience, through iconic references that are subject to collective appropriation. The figurative elements are abstracted and those that refer to homogeneity and urban neutralities are metaphorcised. It subverts both the sense of the mimetic and the abstract approach. The emphasis is on architectural elements that refer to the moment of the experience of the transition between the world of profane relativity and the world of universal forms. The architectural elements are treated under the aegis of phenomenal and non-literal ambiguity, borrowing the terminology of Collin Rowe. It presupposes a topological approach to space, which is linked to layered and shallow spaces of modern architecture. [24]

Sendai incorporates both phenomenal transparency and literal transparency. The tube structure (hollow bundles of steel pipes and lattices) becomes transparent and dematerialized and concurrently colossal transposing all floor plates and irrupting till the roof. Transparency oscillates in façade treatment through lightning control system varied on each floor and inside the tubes. It becomes colored, translucent, reflexive, and even opaque. Façades become different according to orientation, floor functionality, and daylight interaction. Assorted tubes by dimension and placement as also surface treatment produce a discrepancy between homogeneous and organic references. The mixing of residual city and digital media iconographies, like transient and accidental qualities of light, with abstract modern structural grid and homogenous space elements, activates the space. Ito proposes a further interpretation of spatial ambiguity through the device of the discrepancy between architectural elements (surface, space, and structure) by semiotic and phenomenological approach.

The *Taichung Metropolitan Opera House* incorporates elements of the urban syntax that also covert into an ambiguous treatment of the façade and spaces. The promenade that crosses the public park turns into concrete Catenoid tubes that penetrate the building, spreads along the garden roof, and is abruptly cut off by the plans of the facades. It supposes to create ambiguity between private and public, inside and outside spaces. The cut Catenoids turns into organic calligraphy in the glass and concrete façade plan, which is also randomly dotted with wall lamps. *Taichung* is both a neutral glass box and the expressionist structural shape of concrete that leaks out of the building. It is simultaneously the *decorated shed* and *duck*. [25] *“Venturi was the first architect who showed me that the architecture that modernists believed was the pinnacle of the abstract and sacred was in fact subconsciously proliferating throughout the profane world.”* [26] The emergent duck, therefore, means neither returning to heroic architecture nor refusing technology. It means a return to a cosmological sense of nature that includes integration of human corporeal to the flows of technological and organic with no distinction from inside and outside. *“In the modern era, however, this cosmic view was forgotten, and people began to attach importance to the individual, physical body. People are now obsessed with a way of thinking that places the individual at the center of the world and then dissects the world into pieces”.* [27]

3. The worringerian pair and the abject

3.1. Mimesis of the abject

The contrast between mimesis and abstraction could be considered overcome since the supposed crisis of the representative arts on behalf of constructive and engaged Modern Art and even Anti-art movements. However, we can observe the persistence of naturalistic realism references in modern and post-modern arts. The realism of contemporary art incorporates the avant-garde experience of strangeness and shock to involve the viewer in a participatory way. The instruments of the historical avant-gardes were based on the devices of montage and allegory that were then associated with worringerian abstraction. Such devices supposed the rupture with the organic form that defined mimetic arts[28]. Due to fragmentation in vanguardist art, the meaning is suspended and attention is directed to structural elements. These heterogeneous elements work as autonomous emptied signs. They operate as critical fragments that can only be read under the aegis of its non-totalizing ambiguity. Shock comes from this meaning suspension of artwork. Since it is not possible to lose oneself in contemplation, it is expected that art experience could open to life reality.[29] The realistic trend of post-modern arts, however, takes the mimesis of the abject as a shock strategy. It sets realistic images in relation to individual representational apparatus. These images have an ambiguous meaning of referential and emptied signs. It supposes to present reality as traumatic.[30]In the current context, the mimesis of the abject is linked to the processes of human subjectivation. It represents the remains of such structuring process and its relationship with the Other. Such an implication with the subject's psychology was already implicit in the worringerian theory.

For Worringer, mimesis and abstraction correspond to the reflection of two different psychic states in relation to the real. The process of perception and representation of objects corresponds to the corporal phenomenon of friction between man and reality. Such a process does not imply a passive impression of reality, as it involves a human’s psychic predisposition. It depends on the interest aroused by the object. The naturalism valued in the Western artistic tradition is related to the urge to empathy. It is only through the urge to empathy that reality came to be represented as nature. Empathy assumes the identification of man with the object through the recognition of his own vivid aspects. The natural qualities attributed to objects are nothing more than the self-projection of organic psychic-bodily activities. Empathy with the object results from the psychological process of accepting the self-activation of inner life through formal demands. The urge to empathy implied in artistic mimesis reflects the state of harmony between man and the world. It resulted from a relationship of self-confidence that man has developed through knowledge. *“In the forms of the work of art, we enjoy ourselves. Aesthetic enjoyment is objectified self-enjoyment. The value of a line, of a form, consists for us in the value of the life that it holds for us. It holds its beauty only through our own vital feeling, which, in some mysterious manner, we project into it.”* [31] The pleasure provided by the mimetic artistic experience is provided both by the identification of the organic qualities themselves in the work and by the alienation of the real Self through the idealized self-image. Mimesis would therefore be associated with appeasement through the idealized image. *“This affirmation of our individual need for activity represents, simultaneously, curtailment of its illimitable potentialities, a negation of its ununifiable differentiations. We rest with our inner urge to activity within the limits of this objectivation."*[32]

Worringer opposes the urges for empathy and abstraction. The urge to abstract reflects the anguish of the primitive man facing the unknown world. For this man, the psychic need for inner activation depended on removing the object from the course of life's events and to approximate it to the absolute value of the geometric and crystalline forms of the inorganic world. *“The crucial consequence of this artistic volition was, on the one hand, the approximation of the representation to a plane, and on the other, strict suppression of the representation of space and exclusive rendering of the single form.”* [33]

For Worringer, every man would carry with him the residual memory of his initial bipedal experience, still ruled by insecurity in relation to visual apprehension without the help of his hands. His heightened sensitivity to the thing-in-itself resulted in an indistinct and opaque perception of the elements of reality. Such primitive insecurity was translated, therefore, in the dread of space. Distant visual representation was a source of anguish, as it promoted the interconnection of objects through space and fostered the apprehension of their relative qualities. *“It is precisely space which, filled with atmospheric air, linking things together and destroying their individual closedness, gives things their temporal value and draws them into the cosmic interplay of phenomena; most important of all in this connection is the fact that space as such is not susceptible of individualization.”* [34]

Contrary to common sense, Worringer points out that the urge to abstract in architecture corresponds to the strongest expression of material and tectonic qualities. In empathy, such qualities are subjected to organic form mimesis. The comparison between Doric and Ionian temples demonstrated the difference in approach. In the Ionian, the rigidity, weight, and compactness gave way to the sinuosity of the naturalist organic. The Doric temple was the expression of constructive materiality and purpose. The tactile materiality is evident. *"The laws of its construction are still none other than the laws of matter."* [35] In the Ionian temple, the matter is visually abstracted. The idea of organic form subordinates it. *"Here matter no longer obeys its own laws only, but becomes subservient, along with its laws, to a will to art which is informed with feeling for the organic."* [36] The monumental Ionic form is close to a human being because it reflects both his organic proportions as for his narcissistic harmony with the world.

At the beginning of the 20th century, vanguard's movements questioned the “narcissistic-mimetic”

representation apparatus and retook the worringerian dyad for its debate. Primitivisms and infantile regressions were ways of resuming the death drive relegated by Western culture. For Bataille, the urge to abstraction corresponded more closely than empathy to the death drive, which civilized man refuses to recognize. [37]The containment of the death instinct allowed for social structuring and the process that triggered the affirmation of the individual, as distinct from nature and the group. Art, eroticism, and religion reflect the nostalgia for that violent initial instinct that returns man to nature. The naturalism of the mimetic arts expresses the distance of primitive violence and the spread of rational order. [38] The established cultural order silences violence that continues to spread. Modern man conceives the world according to the "narcissistic-mimetic" reason. Adorno describes this mimesis of the modern subject as false mimesis that purges from reality the qualities considered abject for civilization. True mimesis returned man to abject nature. In the false mimesis, the materiality of substances is excreted as a residue of the civilization process. This attempt to dominate the world by purging what does not fit in mimetic-narcissism also acts on interpersonal relationships, where the subject recognizes in the *Other* those vital qualities of their own organic nature and rejects it as the rest of his own animality. *"What repels your strangeness is, in fact, too familiar* (das Unheimlich)*. They are the contagious gestures of direct contacts repressed by civilization: touching, snuggling, placating, inducing."* [39]

3.2. Pure space as mimesis of the self-ideal

For architect Riken Yamamato, the Sendai Media Library represented a change of perspective on the part of Ito, who until then would have remained faithful to the hermeticism of the Shinohara School. Shinohara's heritage implied taking the intellectual process as an individual, which should not be interfered with by external factors. The individual intellectual process aimed to achieve the development of pure space and to ignore the contingent interventions of reality. Through community participation, Ito's architecture freed itself from modern purism and the mimesis of the self-ideal. The project needed the empathy of others to be approved and then demanded its relativization. *"To adopt a relativistic perspective is to allow oneself to change in the process o architectural realization. Ito realized for the first time that discovering this changing self was part of the architectural process. It was entirely different from his previous mode of thought, which was to see pure space being distorted by external factors."* [40] The media library design process would also have been a personal process of Ito's self-acceptance from an un-idealized "I". *"What Ito discovered in the process of realization was not a way of giving precedence to external factors that distort the purity of space, or a formalism that abandoned any effort at opening up space to the outside world, or a cynicism that allows him to pretend that he alone stands on the outside, but a way of transforming his own purity into an actual being. "* [41]

Taichung is also oriented to promote collective participation, although without the concept of collective intellective process as occurred in Sendai. Its strong materiality is already a reaction against the ethereal abstract beauty of Sendai, which resulted from the effacement of part of the constructive process through final finishing. Taichung's final organic elements correspond to the evolution of Ito's concept of generative order that's based on the geometry of fractals. Organic form as explained by fractal geometry has a complex order that does not correspond to symmetrical and hierarchical order associated with mimetic art. Narcissistic mimesis eliminates the abject materiality of nature and its complexity on behalf of operative rationality. Reversed mimesis in Taichung reflects a return to nature without negating its adverse material qualities. Even the human substantial body became one aspect of abject nature in the face of digital technologies and social isolation. Space substantiality in Taichung may cause strangeness and empathy since men forgot its connection to the organic world. It demands tactile and approximated apprehension by body movement. Space is not supposed to be consumed, but to enable life experience. Collective participation comes from its occupation and appropriation. Despite its organic references, it also may be read in its fragmentary ambiguity as a sign. Since man gets liberated from narcissistic ideals of dominating nature, reality may appear not as traumatic. Then nature can be interpreted through Ito's cosmological view up a not self-centered position of man in reality fluidity.

4. Conclusion

Reversed mimesis neither corresponds to the projection of the self-ideal into reality, to the ideal of nature, nor to utopian reality. In the emphasis on the process of design opened to the outside interference, of the Computer Technicians and environmental variables, the reference to natural means the metabolism formed during the architectural event. Man is supposed to achieve progress by the domination of nature moved by rational thinking. Rationality presupposes the elimination of all contradictory elements to such an ideal. Knowledge and technology became myths of the world's transparency. Utopia was one side of the ideal of progress that western culture defended as an excuse to dominate other cultures. The environmental and climatic crisis reflects abuses of man and denounces his narcissistic and homogenizing approach.

Ito's returning to abject nature is not moved by melancholic death drive as for vanguardist and post-modern artists, although he also uses their devices of form fragmentation to create ambiguity and shock. Since modern man became tied to rational abstract order, substantial materiality turned to be considered abject and traumatic. The symbolic apparatus of modern became adequate to the abstracted reality of information society. Nature, otherness, and even subjectivation turn to be considered abject by mimetic apprehension that supposes self-idealization of modern man. That's why substantial materiality turned into a shocking device in Taichung, may be able to remove the man from apathy and intolerance.

Notes

1 Toyo Ito, et al. *Toyo Ito 2002-2016* (Tóquio: GA, 2016), 16.
2 *"In this context it is interesting to note a recent return to the bodily analogy by architects as diverse as Coop Himmelblau, Bernard Tschumi, and Daniel Liebeskind, all concerned to propose a reinscription of the body in their work, as referent and figurative inspiration. But this renewed appeal to corporeal methaphors is evidently based on a "body" radically different from that at the center of the humanist tradition. As described in architectural form, it seems to be a body in pieces, fragmented, if not deliberately torn apart and mutilated almost beyond recognition. Further."* Anthony Vidler, *The Architectural Uncanny: essays in the modern unhomely* (EUA: The MIT Press, 1992), 69.
3 Vidler links *dark spaces* of sublime Enlightenment architecture and glass transparency and reflections of contemporary to uncanny. *"If, as Freud had implied, "the feeling of the uncanny implies the return to that particular organization of space where everything is reduced to inside and outside and where the inside is also the outside," then the space of the mirror would be precisely meet this condition: a space of normal binocular, three-dimensional vision, modified by being deprived of depth. This would lead to the conflation, on the same visual plane, of the familiar (seen) and the strange (projected). In the case of the mirror stage, this would involve a complex superimposition of the reflected image of the subject and, conflated with this, the projected image of the subject's desire – the other."* Vidler, *The Architectural Uncanny: essays in the modern unhomely* (EUA: The MIT Press, 1992), 223.
4 Giulio Argan compares the two strands of classic and romantic in Western art; the first associated with Mediterranean peoples and the second with northern European and medieval art. The romantics, in contrast to the classics, aimed at the expression of the sacred and not at mimesis, as "means of knowing the real, of religious transcendence or moral exhortation".
Giulio C. Argan. *Arte Moderna.* (São Paulo: Cia das Letras. 1992), 11.
5 The emphasis on the process would bring Ito closer to *poiesis* than to imitation mimesis. "With the classic thinking of an art as mimesis (which involved the two planes of model and imitation), the idea of art as a dualism of theory and praxis, intellectualism and technicism comes into crisis: artistic activity becomes a primary experience and no longer derived, with no other purpose than its own making. The binary structure of mimesis is followed by the monist structure of *poiesis* (...).
ARGAN, Giulio C. Argan. *Arte Moderna.* (São Paulo: Cia das Letras. 1992), 11.
6 Toyo Ito, "To Create Architecture that Breathes". In Pedro Gadanho, *A Japanese Constellation: Toyo Ito, SANAA, and Beyond* (NY: The Museum of Modern Art, 2016), 21.
7 Fractals are not defined by exact, sharp, scalable and impermeable boundaries. Like the Möbius Strip, they establish an ambiguous image of the inside and outside boundaries. There are organic and inorganic fractal, like trees and ice fractals.
8 Toyo Ito, "Learning from a tree (2009)," in *Architecture Words 8: Tarzans in The Media Forest*, edited by Brett Steele (London: AA Publications, 2011), 176.
9 Toyo Ito, "The new "real": toward reclaiming materiality in contemporary architecture" *(2006),"* 176.
10 Ibid., 169.
11 Toyo Ito, et al. *Toyo Ito 2002-2016.* (Tóquio: GA, 2016), 16.
12 Ibid.
13 This generation demonstrated apathy about social, sexual and political questions and a strange urge to become indistinct from space and from the others. They would tend to mimic space like in schizophrenia. Hal Foster. *O retorno do real: A vanguarda no final do século XX.* (SP: Cosac & Naify, 2014), 154.
14 Toyo Ito, "Architectural scenery in the saran wrap city (1992)," in *Architecture Words 8: Tarzans in The Media Forest*, ed. Brett Steele (London: AA Publications, 2011), 93.
15 James B. Âreas, *O Estatuto Ontológico da Imagem no Sofista de Platão.* (Tríade, Sorocaba, SP, v.1, p.398-411, dez. 2013).
16 Toyo Ito, "Instead of an afterword 2011," in *Architecture Words 8: Tarzans in The Media Forest*, edited by Brett Steele (London: AA Publications, 2011), 180.
17 Toyo Ito, "The Logic of uselessness 1971*",* in *Architecture Words 8: Tarzans in The Media Forest*, edited by Brett Steele (London: AA Publications, 2011), 25.
18 Toyo Ito, *"The Logic of uselessness (1971)"*, 26.
19 Toyo Ito, "White Ring1976," in Architecture Words 8: Tarzans in The Media Forest. (London: AA Publications, 2011), 36.
20 Toyo Ito, *"White Ring 1976,"* in Architecture Words 8: Tarzans in The Media Forest. (London: AA Publications, 2011), 38.
21 Stan Allen points out Ito's intermediate position, between Tadao Ando's phenomenological approach and Arata Isozaki's linguistics. *"Even when it is not explicitly referential, his work (from Isozaki) is a collage of ready-made signs. The work of Tadao Ando is, by contrast, resolutely anti-stenographic, empting architecture of all possible reference than light, material, and space. "* Stan Allen associates the phenomenological with the individual sensorial experience and the linguistic with the universality of the formal forms deduced from the history of architecture that used in an inventive way in the association with the tectonic, programmatic elements and the spatial treatment would allow the multiplication of meanings. *"Surely Ito's primary intention was not to make reference to Western classical architecture, but by accepting this reference and its associated meanings - while pursuing innovative structural and spatial solutions (...)"*. However, it is not only the universality of abstract forms that gives Ito's work a collective dimension. The collective dimension resulted also from the communicative capacity of icons appropriation. Such icons were heir to both modern and vernacular architecture spread in the city.
Stan Allen, "Toyo Ito's patient search," *Forces of Nature* ed. Jessie Turbull (NY: Princeton Architectural Press, 2012).
22 Toyo Ito, "The reflection of the sacred in the profane world (1978)," in *Forces of Nature* ed. Jessie Turbull (NY: Princeton Architectural Press, 2012).
23 Toyo Ito, 101.
24 Colin Rowe, "Transparency: Literal and Phenomenal," Perspecta n.8 (1963): 45-54.
http://www.jstor.org/stable/1566901
25 Robert Venturi, et al., *Aprendendo com Las Vegas* (São Paulo: Cosac & Naify, 2003).
26 Toyo Ito, "The reflection of the sacred in the profane world (1978), " in *Forces of Nature* ed. Jessie Turbull (NY: Princeton Architectural Press, 2012), 108.
27 Toyo Ito, "Tarzans in The Media Forest (1997),*"* in *Architecture Words 8: Tarzans in The Media Forest*, edited by Brett Steele (London: AA Publications, 2011), 121.
28 Organic form follows formal principles that determine coherence between each part and the whole, it supposes hierarchical relationship between them. Meaning comes from sense of coherence institutionalized by art tradition.
29 Peter Bürger defines historical vangardist movements by the principles of art institution attack and revolutionizing of life through devices of montage and allegory. They supposed rupture with aestheticism, idea of art autonomy, and of artist as a genius. Peter Bürger, *Teoria da vanguarda*, (São Paulo: Ubu Editora, 2017), 155-181.
30 Hal Foster, *O retorno do real: A vanguarda no final do século XX*, (SP: Cosac & Naify, 2014).

31 Wilhelm Worringer, *Abstraction and Empathy: A Contribution to the Psychology of Style*, 3 ª ed., (NY: International Universities Press, INC, 1953), 14.
32 Worringer, 24.
33 Ibid, 21.
34 Ibid, 38.
35 Ibid**,** 79.
36 Ibid, 80.
37 Rosalind E. Krauss. *The originality of the avant-garde and other modernist myths.* (London, MA: The MIT Press, 1986).
38 Georges Bataille. *O Erotismo.* (Belo Horizonte: Autêntica Editora, 2013).
39 Adorno, *Dialética do esclarecimento: fragmentos filosóficos* (RJ: Jorge Zahar Ed., 1985), 170.
40 Riken Yamamoto, "The Discovery of Process," in Ito, Toyo et al. *Toyo Ito*. (London: Phaidon Press Limited, 2009), 33.
41 Ibid.

Image captions
Fig. 1. Left. National Taichung Theater by Toyo Ito & Associates in Taiwan 2005-2016. Photographed by Iwan Baan. Image downloaded from https://www.architecturalrecord.com/articles/12040-national-taichung-theater-by-toyo-ito-associates (accessed September 9, 2020). Right. Balcony detail of the National Taichung Theater by Toyo Ito & Associates in Taiwan 2005-2016. Photographed by Iwan Baan. Image downloaded from https://www.architecturalrecord.com/articles/12040-national-taichung-theater-by-toyo-ito-associates (accessed September 9, 2020).
Fig. 2 Left. Sendai Mediatheque by Toyo Ito, 1995 – 2001. Image from: Ito, Toyo, et al., *Toyo Ito*. London: Phaidon Press, 2009. Right. Sendai Mediatheque: schoolwork's expositions. Image from author, 2017.

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(Dis)continuities in the public-private interface:
the case of the projects of Caraíba by Joaquim Guedes in Brazil and Malagueira by Álvaro Siza in Portugal.

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Abstract

This communication proposal addresses the issue of the public-private interface out of critical readings and analyses around works by two architects from *Escola Paulista* and *Escola do Porto*, respectively. We refer to Joaquim Guedes and Álvaro Siza, and their projects in Caraíba (Bahia, Brazil) and Malagueira (Évora, Portugal). Based on those works, we aim to analyze the different understandings and conceptions on the relations between the public and private domains, in the specific context of housing, identifying (dis)continuities in the way of perceiving and dealing with the interface between the public and private spaces in Brazil and Portugal in the 1970s. Therefore, the object of this study is the public-private interface: the transitional space between the street and the interior of the dwelling, that is, an environment where the dual logic of the limit – internal/external, collective/individual, public/private – are naturally intricate.

Coming from this, we argue that it was under a specific context in the 1970s, both in Brazil and in Portugal, that different approaches to the said interface were best managed. The hypothesis is that these approaches varied according to political, cultural, and social contexts, and according to principles such as the construction of a specific way of designing. These aspects converged in typologies, topographies, and the architects' minds, and, somehow, crossed the Atlantic.

The works were analyzed based on criteria such as the insertion of housing-lots and the positioning of facades, streets, internal and external spaces, windows and doors, services, and recreational environments. This analysis, when correlated to contextual issues found in both cases, shows that there are similarities that, while not evident at first sight, mark a possible turning point in the way of designing the transitional public-private space in Brazil and Portugal.

Keywords: public-private interface, public housing, Brazil, Portugal.

1. Introduction

This research presents an analysis of the morphological aspects placing two housing-focused works as examples in the proposition of a new public-private relationship for both Brazilian and Portuguese architectures. Based on this, we propose an investigation of housing projects developed in the mid-1970s, a period in which both countries were in conflicting sociopolitical situations, mainly because those situations were transitional.

Some parts of Brazil were enveloped in optimism over the "Brazilian Miracle" promoted by its military dictatorship – which would go on for several years still –, while Portugal was going through a political and social revolution linked to the fall of the dictatorial regime of the Estado Novo, of which Salazar was his mentor. It was during these simultaneous periods of tension that both States would propose solutions to the housing issue which, between programmatic and contextual differences, reflect important similarities.

It was also during this period that Portuguese architecture had international visibility, based on a successful critical review of the modernist movement, that Álvaro Siza's work exemplarily elaborated. Brazilian architecture, on the other hand, was already internationally acknowledged ever since the mid-1940s, and "the contestation of modern Brazilian architecture reached mainly its myths, but not its principles. In an attitude of reaction to specific modernity, without presenting a concrete alternative with conceptual thickness and consistency"[1].

These aspects highlight complexities in our disciplinary field that must be identified to accomplish a better understanding of the specificities that go beyond the aforementioned time frames and political contexts. Thus, this study proposes the identification of symbioses and syncretisms that articulate displacements and transformations between the countries, analyzing the transient and the simultaneous in both the macro and the microscale – that is, the geographical cut between two continents and the transition between public and private space. Our goal then is to glimpse non-evident similarities and contrasts that only come out under the transience of a gaze in constant movement.

From this, the geographical cut between continents is justified as a challenge to traditional categories of interpretation and analyses of urban spaces. Adopting a transatlantic positioning, the research object - the public-private interface - is observed here in more than one location, from the comparison of local specificities and movements that go beyond continental borders[2]. The purpose is to understand how some local approaches can mirror parallel and even broader processes, simultaneously similar and conflicting, but connected by long-term historical processes.

One of these processes arises in the relationship that the architecture produced in Portugal and Brazil have with the floor level: be it in the search for the formal dissolution of limits, or the more rigid and loose marking of volumes by pilotis. As Siza puts it, "everything ends and begins at ground-level."[3] And it is in the encounter with the ground and, therefore, with the urban public space, that our object of study takes shape: the public-private interface.

The interface is taken as an environment built *inbetween* different socio-spatial spheres – public and private – and between different access conditions – external/open and internal/enclosed. The interface means, according to the Cambridge Dictionary, "a situation, way, or place where two things come together and affect each other."[4] Therefore, our decision to integrate its public and private aspect as a priority aims to reinforce precisely the paradox of separation and the mutual influence between different domains and spaces.

This definition also relates to Anthony Giddens' understanding of what is public or private. For the sociologist, there are two ways of perceiving privacy: as opposed to the public domain, which is to say, the domain of the state – in a legal definition –, or as the opposition between "what is kept concealed from [private], and what is more openly revealed to [public], others."[5] In both cases, we understand that the private comes from the very constitution of the public domain, and vice versa. Therefore, the terminology portrays the proximity between the two domains of social life, in addition to describing a specific physical space.

This space can be composed or influenced by elements related to street and sidewalk conditions, by the frontal setback of buildings in urban lots (and their treatment as gardens, leisure areas or walls), by characteristics of the accesses, facades (openings, awnings, balconies, and patios) and for its category of use (as housing, as commerce, etc.). In the case of housing typology, the doorstep[6] works as a welcoming space: spatially translating the concept of hospitality – or entrapment.

In this paper, the research methodology of the interface is supported by an analytical and interpretative reading of the works by Joaquim Guedes and Álvaro Siza, namely the housing complexes in Caraíba (1976) and Malagueira (1978), from drawings and photographs[7], in addition to the elaboration of a bibliographic review about the aforementioned works. Our objective is to identify recurrences, exceptions, and singularities that enable a comparison or contrast between the two projects.

Consequently, the projects are investigated as hypotheses of an inflection point in the transitional space of the public-private, which reveals different interior-exterior relations and highlights the search for an alternative – no longer modern, but not *post-modern* either – to the design of the public-private interface in both countries.

2. A brief overview of the housing issue in Brazil and Portugal in the 1970s

The Brazilian housing problem was, in the 1970s, mainly subject to investments by the National Housing Bank (*Banco Nacional da Habitação*, or BNH), which prioritized the large-scale construction of housing for sale. In 1974, the National Commission for Metropolitan Regions and Urban Policy (*Comissão Nacional de Regiões Metropolitanas e Política Urbana*, or CNPU) was founded, fostering the creation of general urban development plans. This state organization sought, at first, to focus on the country's urban expansion, which was in line to integrate the national territory into the global economy.

It is in this euphoria-driven scenario of urban planning that new cities were created, under pretenses such as populational growth and economical boosts to the countryside, mainly through mining operations or the installation of hydroelectric power plants. This is the context in which the team led by architect Joaquim Guedes developed, between 1976 and 1982, the new city of Caraíba project – currently designated *Núcleo Residencial Pilar*, a district to the town of Jaguarari – for the copper mining company *Caraíba Metais*, in northern Bahia. However, it is important to emphasize that the city of Caraíba can be understood as planned by the Brazilian State only in a secondary way, as a side effect of the state planning that granted fiscal and financial incentives to large mining companies.

In the same period, in Portugal, the housing issue was dealt by the Housing Development Fund (*Fundo de Fomento à Habitação*, or FFH), known for the use of housing provision as a method to a social ordering of the population during the dictatorial regime[8]. After the 1974 revolution, the Portuguese housing problem was entrusted to a specialized technical body designated by the Local Ambulatory Supporting Service (*Serviço de Apoio Ambulatório Local*, or SAAL). The goal was to support municipalities and residents of precarious urban occupations, by helping them to invest in resources to solve housing problems – a goal founded on two pillars: popular participation and, whenever possible, the maintenance of the population in the vicinity of established occupations.

Nowadays, the SAAL is not only seen as a state-supported laboratory for experimentation in housing architecture, but as a period in which the right to housing was outstandingly discussed and practiced, a time when architectural activity was celebrated as a social engine, and, most importantly, as a point of emergence to "mechanisms inducing a methodological evolution" in the academic field of architecture[9].

It was under these circumstances that teams from SAAL-North, in the city of Porto, promoted local interventions led by students and professors of the then Porto College of Fine Arts (*Escola Superior de Belas Artes do Porto* or ESBAP, now *Faculdade de Belas Artes da Universidade do Porto* or FBAUP), quickly achieving great visibility. Among the projects developed, the solutions led by Álvaro Siza were quickly disseminated in international publications, boosting the architect's career and leading to him being invited to design in other countries, as well as in the city of Évora, in Portugal, where the Malagueira Quarter is located.

3. The tipping point in the design of the public-private interface: transatlantic parallels between Caraíba e Malagueira

Between the decades of 1950 and 1980, several architectural operations challenged binary polarities such as individual and collective, local and universal, and even modernity and vernacular tradition[10]. The challenge to these dual structures is understood here as an active condition in the face of conflict negotiation between architectural theory and practice, an aspect which motivated the revision of modern precepts, as stated in Team X's observations in the last International Congresses of Modern Architecture (*Congrès internationaux d'architecture moderne*, or CIAM). In this sense, works that approached notions of ambivalence, hybridity, ambiguity, and contradiction began to appear, in a stance between the typically modern binary postures and the attention given to local or contextual circumstances.

In the mid-1970s Portugal, the negotiation of limits between individual and collective domains became a matter of resonance in the political scenario oriented to the topic of popular housing. This situation, pushed to extremes as the dictatorial regime reached its end, contributed to questioning the universality of modern architectural principles in the face of local culture and identity.

Malagueira, direct architectural testimony of the SAAL-North process, arises from the debate on the interdependence between the collective space and the designing of housing units in a dense urban context, with the islands of Porto serving as a typological figure[11]. In this way, Siza assimilates the attention given to the local reality both as a methodological basis and a design principle, also establishing ideas that dialogue with natural and built pre-existences, the latter being relative to the identity and morphological characteristics of the "clandestine" neighborhoods located around the intervention area.

Caraíba, on the other hand, was born out of the need to support mining activities in the Brazilian countryside, brought by the developmental atmosphere of the "Brazilian Miracle" years. Joaquim Guedes (1932-2008) was the one responsible for the urban planning of the new city of Caraíba: an architect from the School of Architecture and Urbanism of the University of São Paulo (*Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo*, or FAU-USP) who, for many years, held the position of professor at the same institution. The project was requested by Caraíba Metais S.A., which was founded by the Brazilian Ministry of Mines and Energy. The new city would then aim to support the copper mining activities, carried out by the aforementioned company in the surrounding areas over the next twenty years[12].

After the project's conclusion, Caraíba was widely promoted in both national and international publications, highlighting its ranking among the eight most important Brazilian projects of the 1980s at the Chilean Architecture and Urbanism Biennial (*Bienal de Arquitectura y Urbanismo de Chile*) in 1992[13]. As a result, Guedes received invitations to take part in international competitions, among which was the Belém Cultural Center (*Centro Cultural de Belém*, or CCB), in Lisbon.

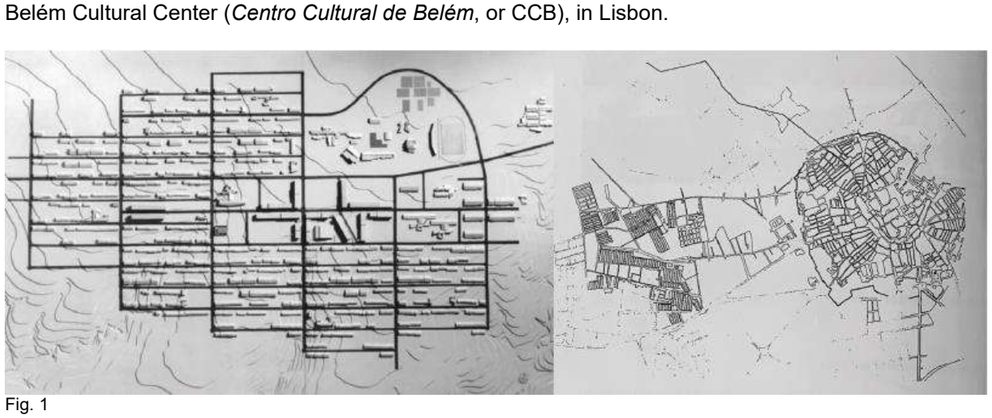


Fig. 1

In the established parallel between Caraíba and Malagueira, it is important to emphasize that there are intrinsic differences: the condition of a *new city* and that of a *quarter*. Caraíba was created to be, as far as possible, a self-sufficient nucleus, given its isolation in the hinterlands of Bahia. Malagueira was established next to them within the city of Évora, including yet another series of settlements in its immediate surroundings, with which it was intended to relate, promoting its articulation through structural axes (Fig 1).

The project for the new city of Caraíba was preceded by a broad socioeconomic study of the region, treated as a basis for the scaling of housing and services supply. Thus, a compact occupation was suggested to attain the least possible level of displacement in the semi-arid climate region. This *compactness* should be guaranteed by the sorting of local inhabitants into groups of families and single individuals, with the latter being pushed into the city center, along with the shops and commercial buildings.

As it also happens in Malagueira, Guedes' project begins with a detailed study of urban and architectural patterns in the pre-existing settlements, in addition to research on local habits and cultural patterns. Furthermore, topographical and climatic conditions are taken into account in the disposition of roads and homes.

3.1. The housing interfaces

In Malagueira there was an initial proposition for two types of housing units that differed from one another by the location of the yard: at the front (Fig. 2) – in the region of the interface – or at the back of the lot – outside the region of the interface. The lots are designed within fixed dimensions (12x8m), and the typologies allow for an increase in the number of rooms on the second floor. The repetition and monotony of the housing complex are broken by adapting it to the local topography, thus, the distribution of the units is staggered according to the natural slope of the terrain.

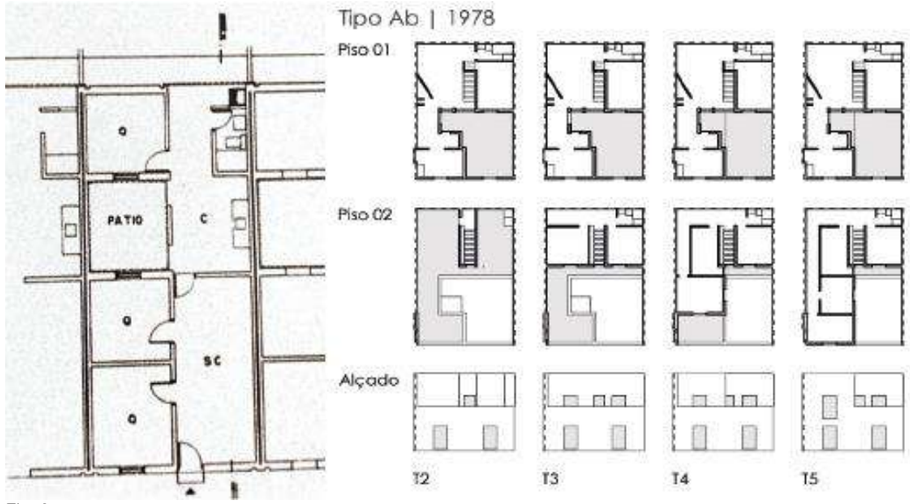


Fig. 2

Looking at Caraíba, its several types of housing units – row houses and detached units – are distributed in the urban space taken the socioeconomic profile of future residents into account. Guedes intended to mix the population in the new city, in an attempt to mitigate the effects of the social and spatial segregation linked to the residents' roles in the mining company. Thus, the implantation of houses and smaller lots, aimed at the lower-income population, occurs close to the center, in a close relationship with public facilities. And larger houses and lots, in more peripheral sectors[14].

It is clear, then, that in Siza's project there is a fundamental concern with the relationship between the housing unit and the street. The public-private interface – with or without a patio – is the principle that determines the morphology of the units and the urban complex. The consideration for the topography and, also, for the possibility of growth of the units (Fig. 2), allows the interfaces to vary according to the needs of each resident, which are expressed in solutions and evolutionary stages that differ from lot to lot.

Back to Caraíba, the distinction of interfaces from lot to lot does not happen in a self-evident manner, since there is a grouping of typologies in their distribution in the urban space. Besides, the topography of the region is not marked by large unevenness, thus, the variation of the interfaces is less noticeable from the public space. However, both projects are in the absence of frontal retreat, that is, both explore direct communication between the street and the dwellings (Fig. 2 and 3).



Fig. 3

These units show the need to reduce the number of facades exposed to the sun and the warm wind of the hinterland. Thus, Guedes also eliminates the lateral setbacks, leaving only the backyard free to use. The eaves are also taken off of the facades (Fig. 3). In Caraíba, the dwellings' internal organization follows the local construction logic: the living room closest to the street, the bedrooms leaning against the side walls, and the kitchen located at the back of the house. The innovation lies in incorporating the patio into the domestic space's organization. Guedes does not locate it in the interface, however, but in the central region of the units. The patio in Caraíba's dwellings is then a mechanism to improve environmental comfort inside the units (Fig. 2).

This goes against the choice for an exposed patio in Siza's proposal for Malagueira, where the boundary between the private environment and the public space is defined by the patio and the buildings' closing wall, manifesting the concept of diversity as a quality that expresses different ways of living and inhabiting (Fig. 3). In other words, the individuality of each resident – expressed in their choice for different kinds of housing, for the growth stage of the unit, and even for one of the three height options of the exterior walls[15] – is necessarily manifested in the morphology of the public-private interface.

In Caraíba, the main distinctiveness of the proposal is also located in the interface environment: the misalignment between the frontal setback of the housing lots and the street curb. This aspect is not supported by references to the region's ways of living, but by the choice to change the rhythm of the facades, either widening or narrowing the pedestrian circulation space. At this point, the parallels with Team X's propositions in the European context become evident, as well as the correlations with Jane Jacobs' criticisms of the American urban scenario[16]**.** The discussions revolved around the diversity of the sidewalk as a transitional space, in terms of occupation and morphology: with the incentive to create recesses, projections, spaces of meeting or waiting, between the private and public space.

Another point that testifies in favor of the interpretation that the public-private interface has preponderance in the articulation and morphology of Siza's proposal is present in the guidelines defined by the architect so that other professionals can design housing units for the private sector in the quarter. Practically all of these guidelines are concerned with the configuration of the interface: the size of the lot and its facade, the minimal area of the patio, the height of the house and its street-side wall, and the dimension of openings and frames.

3.2. Urban structuring: impacts on interfaces

Both proposals are structured from the concepts of high density in short heights, leading to greater communication between the houses and the street. The narrow width of the streets, in Malagueira, allows for proximity between opposite interfaces, marking a will for door-to-door dialogue[19], in alignment with the will to form a local identity and the desire to preserve privacy or individuality – striking in the Portuguese way of living –, aspects well represented by the patios located next to the interfaces (Fig. 2 and 3).

In the urban fabric of Caraíba, functions are organized by circulation axes, and by a system of squares located next to schools, the urban design of the roads and blocks is based on the climatic conditions of the region. Streets are oriented east-to-west, while buildings are north-to-south; however, those elements present themselves in different dimensions and purposes, from wide avenues to narrow streets designed solely for pedestrians.

The point of greatest contrast between the urban elements in these is perhaps the attention given to the function and width of the sidewalks (Fig. 3). In Caraíba, Guedes uses them as large public spaces prone to afforestation to alleviate the climate; in Malagueira, street and sidewalk spaces are often merge into one, referencing the historical feature of the streets in Évora.

3.3. Other interfaces: the *conduta* and the pilotis

The interdependence between individual and collective space is the vital element in the Malagueira project, expressed not only in the positioning of the patios and their symbolic function but also in the *conduta* – a kind of pipeline that, in a historical reference to the Évora aqueduct (*Aqueduto da Água de Prata*), concentrates the essential distribution infrastructures and articulates the housing units within the general planning of the quarter[17] (Fig. 4). As a backbone for the urban fabric, the *conduta* acts as a defining factor for yet another scale, in addition to representing a path between the residential and the commercial sector.

It is in the commercial center of Caraíba that the public-private interface is articulated in a kind of pilotis gallery that enlarges and shadows the pedestrian space of the sidewalk. The ground floor buildings plus two floors have mixed-use: in direct contact with the street there are shops and services, and above that, there is housing accommodation for single individuals. Thus, the nature of the *limit* becomes milder and even hybrid – neither open nor closed: a public space for collective use shaded by private spaces. This gallery also makes way into the interior of the blocks, breaking the linearity of the pedestrian path while creating sights and routes that show other forms of occupation in the city (Fig. 4).

The pedestrian route in the Malagueira Quarter is continuously accompanied by the presence of the gallery, which proposes an irregular path that finds both open spaces and narrow alleys, in a clear allusion to the historic city by which it is conformed. In Caraíba, the pilotis of mixed-use buildings in the central area mark the landscape of the town (Fig. 4), differentiating it from neighboring settlements by creating a unifying element that promotes a sense of local identity among residents.

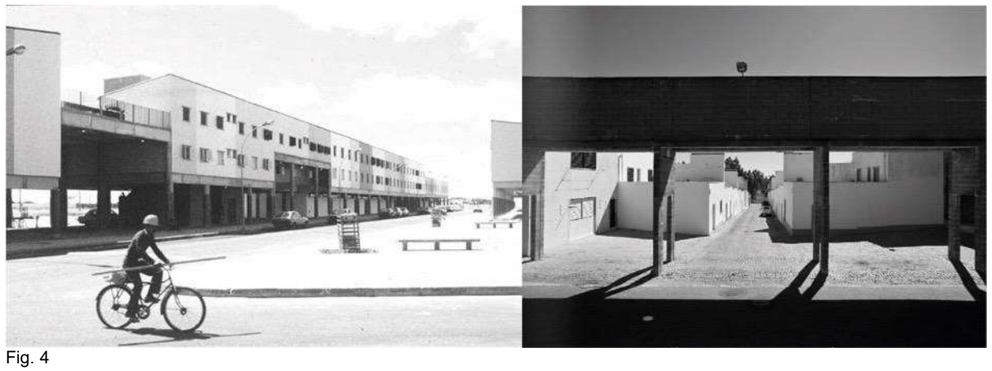


Fig. 4

Pablo Lühers Graça[18] correlates the usage of the gallery that marks the interface of the central area of Caraíba (Fig.4) to the desire to break free from the *monotony* of corridor street. The theme of monotony is also present in Malagueira, however, Siza faces it from the topography, the possibilities of morphological variation, the different height of walls, the location of the patios, and, of course, with the *conduta* as a structuring element of the public space design. So, there seems to be, in Malagueira, a greater degree of complexity in the treatment of the public-private limit, interfering with the internal structuring of the lots and crossing characteristics of both the geography and the urban articulation of the quarter.

3.4. Appropriations and changes to interfaces

In Malagueira, even the changes that overlap with Siza's guidelines show that the proposal around the public-private transition was successful. This is due to the changes being concentrated on superficial interventions, such as paintings on the facades or walls, which aim more to differentiate the housing interfaces than to change its shape in favor of a greater or lesser relationship with the street. Also, when Siza proposes evolutionary typologies, he insists on maintaining a single aspect fixed to them all: the size of doors and windows[20]. This fact contributes to the hypothesis that the attention given to elements that make up the interface in this project is unique.

As for the post-occupation modifications carried out in Caraíba, the misalignment of housing lots has changed considerably over time. Either the proposal was not well taken by the population or the desire for a bigger private area – especially for parking – was prevalent. The same occurred with pilotis arranged under central buildings, with total closure of sections of the shaded area for internal or private use. Thus, unlike the guidelines defined by Siza for Malagueira, the constructive changes in Caraíba continue to occur without criteria, resulting in the loss of the original character of the work[21].

However, the contradiction lies in the fact that the strong local identity of Caraíba's inhabitants is precisely associated with the morphology of its center. The central landscape is easily identified by those who know or have visited the place, and the inhabitants have an affectionate relationship with it, expressed in the appreciation for the shape of the central buildings[22].

3.5 Other parallels and dissidences

The limits – between physical spaces and social domains – are elaborated subtly and ambiguously in the Malagueira project, in such a manner that the border between housing and public roads ranges from clarity to flexibility while respecting the cultural qualities of the local way of living. The *conduta*, when located next to the commercial interface, place a new layer in the transition between private and public space, which adds shading, a new scale, symbolism, and distinct materiality (Fig. 5).



Fig. 5

The focus on user needs, on the conditions of local contexts, and the detail as a technical concern are common points in the practice of both architects. Guedes places greater emphasis on the local constructive tradition and the formation of the architect based on the knowledge of the construction site[23], while Siza has a more abstract approach to the built environment, although not any less rational (Fig. 5).

It is important to stress, however, that the resemblance and contrast exposed here might have displeased Guedes, who once defined the architecture produced by Siza as "an example of a frugal thing, an architecture of the non-essential."[24] In opposition to this criticism, we resort to the architecture of Alvar Aalto, several times cited as an essential reference by both Siza and Guedes. Another convergence in dissent...

4. Final remarks

A *correlational dialogue between two architectural projects* was proposed here, which naturally touches other correlations, but does not remain, for now, in them. The new interpretation of the projects and construction of the new city of Caraíba and the Malagueira Quarter, proposed from a transitory and constant outlook between them, sought to draw closer a relationship divided by the Atlantic, in which there seems to have been a considerable transformation in the way of designing the public-private space transition in both countries.

The study of these works, their similarities, and dissidences, focusing on the analysis of their public-private interfaces, allowed us to find the following recurrences (or continuities) beyond continental borders in the 1970s:

- The attention given to local context as a project reference: in both projects, there was a thorough study of the urban and architectural patterns of the pre-existing settlements, in addition to knowledge of the local cultural habits. These analyses led to the incorporation of the local way of living, mainly concerning the structuring of the direct interface between housing and the street, with the pre-definition of relationship and mediation devices between exterior and interior, and public and private spaces.
- The search for diversity in the development of the interface design: in Caraíba this point is marked mainly by the misalignment of the fronts of the lots with the public space of the sidewalk and the street, While in Malagueira the residential interfaces are diversified by the various typological choices, suitable for extensions and with different heights for the walls and different locations of the patios. Furthermore, in the Malagueira quarter, the relationship/passage between public and private is made gradually in the urban plan, exploring a principle of approximation. The Park, the squares, and the trade and services hub make the first contact with the public and collective in the new neighborhood. The conduct marks a moment of transition, making a kind of filter that marks the entrance to each of the streets leading to housing, distributing flows.
- The use of commercial interface devices: the *conduta* in Malagueira, and the pilotis under the central buildings in Caraíba mark possibilities in which the interface acquires not only a new form and materiality but also a strong symbolism and identity that articulates, gives unit and builds the urban landscapes.

As for discontinuities - or contrasts -, the following stand out:

- The treatments of the patios in the organization of the housing units and interfaces. In Malagueira its positioning is fundamental, while in Caraíba its location and function have no consequences for the public-private transition.
- The presence of the sidewalk as an integral part of the public-private interface in Caraíba and the shared roads of the Malagueira Quarter, participating in the interface in direct contact to the street, is not mediated by sidewalks.
- Post-occupation changes that demonstrate different appropriations of the projected interfaces: The modifications in Malagueira – in addition to the possibilities of expansion and typological diversification – are located mainly on the surface of the facades, in the form of paintings, while the interfaces in Caraíba were almost completely changed in their forms, occupying public areas in favor of more private space.

Siza's work finds – in the local context – the establishment of a spatial dynamic that is consolidated in the attention given to the housing interface and from the *conduta*, a posture that ends up becoming an alternative for the formation of a new urban space that also references the city with which it is connected. In Caraíba, Guedes exercises experimentalism (common to his practice) in the articulation of private and public spaces with a strong respect for the rigid climate of the hinterland. highlighting the way buildings in the city center approach and relate to the ground and the public space.

In both projects, the affinity with their locations occurs not only as a formal or material strategy but as a project methodology that underlies new ways of living: rooted in tradition, with different branches in the critical and typical contemporaneity of their time.

Therefore, these works covered reveal possibilities for dealing with the transition between the private environment and the public domain, using the knowledge accumulated in the disciplinary field of architecture and crossing it with the knowledge of the culture and the history of its implantation regions, exposing broader cultural values, still valid for the design of the public-private interface in both countries and contexts of insertion.

The innovations in both Caraíba and Malagueira projects, which at first glance can be characterized as mainly typological, are understood here as a proposition for a new look at the public-private interface, going beyond the constructed housing environment, and consecrating itself as an articulating element of buildings in urban space. The urban dimension of the impact of the new interface treatment is, perhaps, the relevant intersection *between* these projects.

Notes

1 Hugo Segawa, 1999: 198.
2 Ana Luiza Nobre e João Masao Kamita, 2019: 8.
3 Ibid., 35.
4 Cambridge University Press Dictionary. https://dictionary.cambridge.org/dictionary/english-portuguese/interface.
5 Anthony Giddens, 1991: 152.
6 Herman Hertzberger, 1999: 35.
7 The context of the COVID-19 pandemic made it impossible to visit both projects.
8 IHRU, 2018: 236.
9 Alves Costa apud Bandeirinha, 2011: 10.
10 Nelson Mota, 2014: XXI.
11 Ibid.: 235.
12 Joaquim Guedes, 2006: 1.
13 Pablo Lühers Graça, 2007: 188.
14 Ana Carolina Bierrenbach, 2007.
15 According to Brigitte Fleck and Pfeifer Gunther (2013: 28), Siza initially stipulated that all walls should be 3 meters high, then opted for 2.25 meters, finally allowing cases in which those were 1.50 meters high.
16 Rogério Quintanilha and Mônica Junqueira de Camargo (2013: 101) also relate Guedes's production to "Nathan Rogers' pre-existences, Aldo Rossi's typological criticism, and Robert Venturi's appropriation of mass culture," adding yet the influence of Lina Bo Bardi and her "careful reading of Brazilian popular culture."
17 Ana Luísa Rodrigues, 2015.
18 Pablo Lühers Graça, 2007: 214.
19 Brigitte Fleck and Pfeifer Gunther, 2013: 65.
20 Ibid.: 27.
21 Ana Carolina Bierrenbach, 2007.
22 Rogério Quintanilha, 2016: 263.
23 Pablo Lühers Graça, 2007: 1.
24 Entrevista: Joaquim Guedes, 2000.

Image Captions

Fig. 1. Left. Urban Plan of the City of Caraíba – in Guedes (2006). Right. Urban Plan of the Malagueira Quarter next to the historical city of Évora – in Molneti (1997).
Fig. 2. Left. Central location of the patio in the floor plan of a house in Caraíba – in Camargo (2000). Right. Frontal location of the patio in the evolutionary typology (Ab) in Malagueira – in Sousa (2016).
Fig. 3. Left. Habitational interfaces in Caraíba – in Camargo (2000). Right. Habitational interfaces in the Malagueira neighborhood – in https://www.archdaily.com.br/br/01-49523/classicos-da-arquitetura-quinta-da-malagueira-alvaro-siza/49523_49535?next_project=no.
Fig. 4. Left. Pilotis in the central area of Caraíba – in Guedes (2006). Right. The infrastructural *conduta* in the Malagueira Quarter – in https://www.bmiaa.com/wp-content/uploads/2015/08/Screenshot-2015-08-07-23.00.35.jpg.
Fig. 5 Left. View of the pilotis gallery under the central buildings in Caraíba – in Camargo (2000). Right. The *conduta* passing through the houses in Malagueira – in https://www.archdaily.com.br/br/01-49523/classicos-da-arquitetura-quinta-da-malagueira-alvaro-siza/49523_49537?next_project=no.

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The SESC project:
a tale of two units

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Abstract

SESC- Serviço Social do Comércio is a Brazilian private institution acting nationwide to promote the welfare of commerce employees, famous for the social and architectural quality of its units, which offer educational and recreational facilities besides health services.

An outstanding example in the periphery of São Paulo's downtown is SESC Pompéia (1976-1986) by Lina Bo Bardi. She recycled a factory for leisure and education while building brutalist towers for sports, reiterating modern architecture's interest in the exposure of technological equipment and the practical and symbolical values of the industrial heritage. SESC 24 de Maio (2000-2017) by Paulo Mendes da Rocha rises in the heart of the same downtown. He recycled a 12-story-high Art Déco department store in a square corner lot. He stripped down the store to its bones, added a pool at the rooftop, ramps at one side, a theater in the basement, left open the ground floor, created balconies on others, and wrapped most of the structure in a curtain-wall as shimmery outside as the pool above while exposing the required ducts and cables inside.

Comparison between "hot" Pompéia and "cool" 24 de maio is enlightening. Each extracting poetry out of ordinary spoils in different ways, they show that modern architecture is a living tradition made up of different strands over time and far more positively engaged with the existing city and disciplinary history than post-modern detractors assumed. Formally hybrid and evolutionary rather than pure and revolutionary, their civic monumentality results from the bold introduction of new material freely qualifying old fragments, and thus problematizes the ongoing trend of indiscriminately conferring heritage value to every vestige of the past.

Keywords: SESC, Lina Bo Bardi, Paulo Mendes da Rocha, modern monumentality

1. Introduction

SESC (*Serviço Social do Comércio*) is a non-profit private institution that operates in Brazil since 1946, supported by mandatory contributions from commerce businessmen and focused primarily on the social well-being of commerce employees and their relatives. SESC has departments in every state of the country. SESC São Paulo is known for the social and architectural quality of its multifunctional activity centers (as opposed to a few specialized units). There are 18 of them now in the city of São Paulo alone (which has), out of a present total of 39 units in the state; more are on the way, on the megalopolis of 20 million inhabitants as on the state, so that it is quite legitimate to speak of a SESC project. The program of these activity centers crystallized in the 1970s. Half a century later it still holds. Each unit works like a big club aspiring to be a social condenser, a device for transforming social relations between citizens. They offer recreational and educational spaces open to the general public, while health services and social assistance are restricted to members. Each unit is a cultural and sports center along with a dental clinic and a cafeteria or food hall. Sites vary in area from 1200 to 32000 sq. meters; floor to area ratios, from 1 to 13.[1]

So far, the most celebrated examples of the institution's architectural patronage involve the reuse of parts of an existing structure. SESC Pompeia (1976-86) was designed by Lina Bo Bardi (1914-92), assisted by Marcelo Ferraz and André Vainer (b. the mid-1950s). SESC 24 de maio (2000-17) was designed by Paulo Mendes da Rocha (1928-xx), assisted by MMBB Arquitetos principals Marta Moreira, Fernando Mello Franco, and Milton Braga (b. the mid-1960s). Renovation of the eighteenth-century Solar do Unhão to convert it into the Museum of Modern Art of Bahia (1958-59) and the brand-new Museum of Art of São Paulo (1957-68). Known for the consistency of his work since winning the competition for the Clube Atlético Paulistano gymnasium (1958), the latter was the author of exemplary interventions in existing buildings, like the Cultural Center (1996) in the modern FIESP building (1969-79) by Rino Levi (1901-65), and the renovation of the neo-Renaissance Lyceum of Arts and Crafts (1905) to house the Pinacoteca de São Paulo (1993-1998). Neither São- Paulo based Bo Bardi nor Mendes da Rocha had the world fame they now enjoy when they got the SESC commissions. The 1980s handbooks had declared Brazilian modern architecture, presumably overvalued, to begin with, as dead and buried after Brasilia by Lucio Costa (1902-1998) and Oscar Niemeyer (1907-2012), the leaders of a Carioca school flourishing since the mid-1930s. It took the 1990s for the global North to start recognizing that Brazilians had not asked permission to keep doing architecture.

2. SESC Pompéia

Occupying most of a superblock in the periphery of São Paulo's mid-twentieth century downtown, SESC-Pompéia was conceived when apartment and office buildings started to replace the factories and worker's row houses in the area. The activity center came about in two acts. First, as suggested by one of SESC's directors who had visited San Francisco's Ghirardelli Square, the chocolate factory conversion by Halprin, Wurster, Bernardi & Emmons (1964), Lina reused the existing drum factory on-site (1976-82). Its sheds became a theater, cafeteria, classrooms, and a spectacular covered plaza, a half-sibling of the open ground floor of the Museum of Modern Art of São Paulo, another Bo Bardi project (1968), the marquee at Ibirapuera Park (1954) in São Paulo by Oscar Niemeyer (1907-2012), and the Plaza Cubierta at the campus of Universidad Central de Venezuela in Caracas (1953) by Carlos Raul Villanueva (1900-1975). The reinforced concrete structure of the sheds was cleaned; the plaster on the brick walls was removed. The clay tiles at their roof were partly replaced by translucent glass tiles to create a diffuse and intimate luminosity. A place of toil was turned into a leisure setting. The new iron fireplace reinforced the intimation of domesticity, while the heavy and massive furniture was fixed to the ground as in a public garden. Bo Bardi designed almost indestructible chairs and tables made up of glued hardwood strips warmly colored, easy to the eye and the touch if not to the user's buttocks. Comfort, she intimated, is a bourgeois concept. A curvilinear interior pond alludes to Niemeyer; trellised sliding doors, to Costa; the new theatre foyer, to Vilanova Artigas. Time tames vanguards, they insinuate- while hardship is the mother of invention.[2]

Indeed, the decision to recycle the existing sheds prevented designing low-lying sports facilities. The remaining area was small for that and made smaller because it was crossed by a creek and urban legislation forbade to build upon it. Bo Bardi had to go vertical, following SESC Consolação (1961-1967) by Icaro de Castro Mello (1913-1986) and Alfredo Paesani (1931-2010) where multi-sport courts topped the swimming pool. She built three volumes: two towers connected by walkways on either side of the boardwalk-covered creek, and a water tank resembling a chimney or a candle (1982-1986). One tower contains the stairs, elevators, service, and fitness rooms; piled multi-sport courts top a swimming pool in the other. The water tank flaunts scalloped rings; Lina said they were suggested by the texture of Torres de Ciudad Satélite (1957-1958) in Mexico City by Luis Barragán (1902-1988), another instance of her Latin American awareness. The Brutalist concrete of the towers shows irregular perforations regularly arranged and regular perforations irregularly arranged. The silhouette of the towers assimilates

them to the new buildings in the neighborhood. The fenestration and the irregularly spaced, overlapping balconies signal difference, evidencing the special program: a citadel of freedom according to Bo Bardi.



Fig. 1

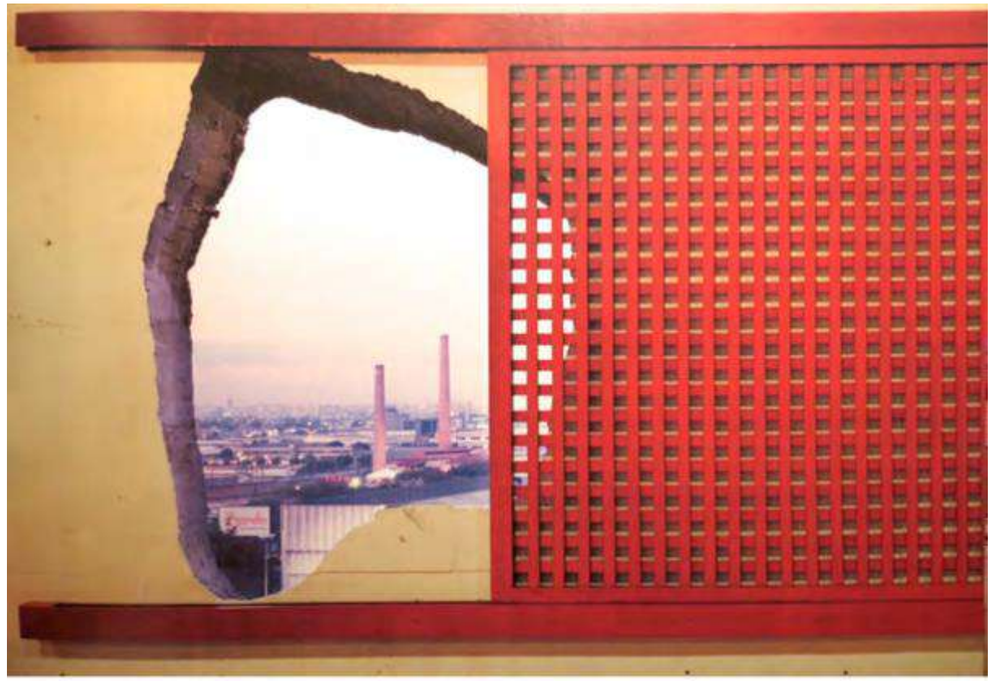


Fig. 2

The towers do rise as fortresses that watch over the boardwalk turned into beach equipment by the mural painted in the facing boundary wall. The walkways connecting them would have a symmetrical horizontal projection if there were not a small deviation at the upper level; they possess the almost perfect balance of a Persian carpet, in the words of critic Ruth Verde Zein.[3] They are spears that transform the towers into two warriors with bloodied armors: the pools of red wooden trellis behind the holes complement the streams of red external ducts and the clots of red exhaust fans. The towers' smooth utilitarian interiors flirt with suburban kitsch through colorful graphics on walls and floors: for instance, women's toilets are painted pink and gold, men's toilets come in blue and silver, and the cafeteria's murals would not be out of place in a cheap popular pub. If they also bring to ming the naiveté

of children's drawings, they do not ignore childhood's brutal and warlike component. Surprisingly, so much concrete does not suppress openness from within, when cutouts of city, sky, trees, and mountains appear silhouetted through the surprisingly huge holes. Bo Bardi's activity center defends continuities (insofar as it is a recuperation job) without shunning changes, some evolutionary (insofar as it is a recycling operation), some radical (insofar as it is a new architectural intervention). The spacetime warp is built in. Given the embourgeoisement of the industrial sheds and alley, recalling their ancient aggressiveness befits the new sports facilities and enriches their meaningfulness; after all, hardship strengthens character and in due course fades into soothing remembrance. Bravely and wisely, Lina proclaims that *terribilità* is as inherent and relevant to the city as *bellezza*, appeasement as important as a provocation, and urbanity requires both balm and blow.

3. SESC 24 de maio

SESC 24 de Maio rises in the heart of that same mid-twentieth century downtown whose periphery received SESC Pompéia. Abandoned by the upper classes since the 1970s, it remains a highly vital and accessible area, punctuated by important nineteenth-century cultural institutions and remarkable twentieth-century structures, including many commercial galleries. One block away from República Square in one direction and the Municipal Theater in the other, the site amalgamates the corner lot occupied by the vacant Mesbla department store and a narrow adjoining lot on D. José de Barros, occupied by the vacant eight-story Fasano Vertical Restaurant (1964) by Telesforo Cristofani (1929-2002), another noteworthy Brutalist architect; the resulting site measures about 40 meters along a pedestrianized D. José de Barros Street, and about 60 meters along 24 de Maio Street.[4]

Mendes da Rocha did not raze the existing twelve-story Art-Déco department store. He stripped it down to the bare bones and demolished excrescences to create a U-shaped volume. In the hollow between the U strokes, he inserted four columns. Those support a new two-level rooftop structure featuring a huge swimming pool and surrounding deck above locker rooms, a theater in the basement, and floor slabs defining single- or double-height spaces according to need; rational zoning superimposes reception, administration, food court, lounge, culture (library, exhibition area, workshops), dental offices, and sports (courts, exercise areas, pool). The lateral setback facing 24 de Maio Street got new elevators, stairs, balconies, and lighting wells. The lateral setback facing the pedestrian street got ramps that propose a vertical promenade articulated with horizontal circular routes on several floors. Slabs were added to the original rounded corner, increasing the built area and sharpening the built volume. The new columns supporting those slabs and setbacks rise to carry the new rooftop structure, in which steel replaces concrete allowing for big spans and cantilevers. As for the demolished restaurant, it was replaced by a taller structure for services. Mendes da Rocha does not use the Kahnian terms; he prefers colorful nautical expressions, task elements for the servant spaces, and task force for those served.



Fig. 3

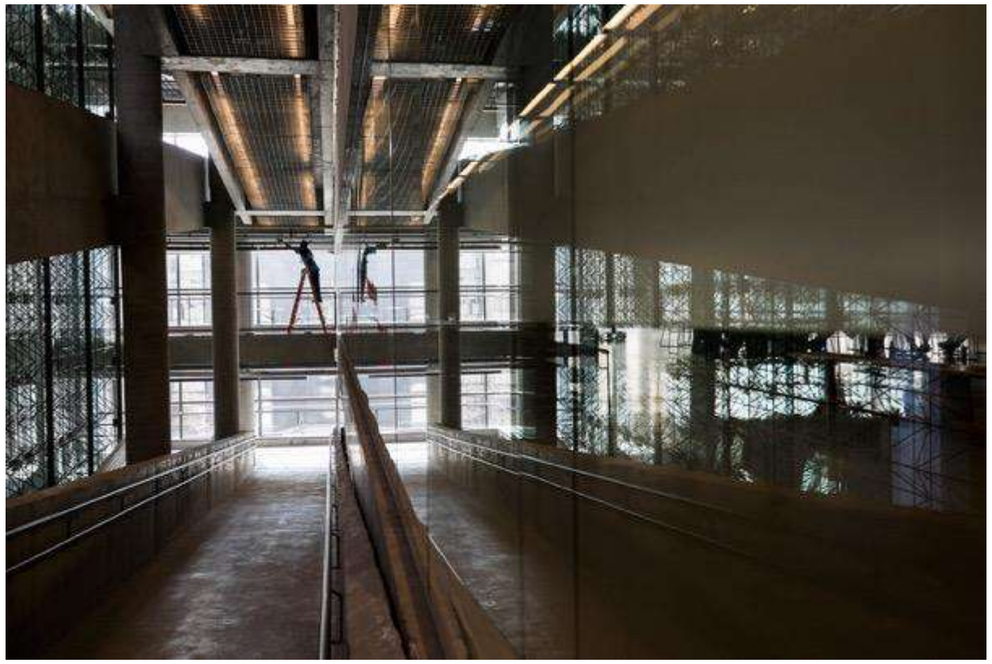


Fig. 4

The old concrete was scraped, and the new concrete poured into cardboard tubes or plywood formwork ensuring a smooth texture. The elevations are vertically tripartite. The structural frame of the one-story base and ten-story shaft is partly original and partly new; only new columns puncture the open twelfth floor (the old rooftop, now christened the pool garden). The base ground floor is cut diagonally by a public gallery and square provocatively painted in pink; a chamfered triangular volume shelters the reception sector at the corner. The reception volume is set back from the edges and the ceiling, leaving visible from the street the tops of the old peripheral columns and the entirety of the new corner columns. The shaft is clad in a mirrored greenish curtain wall, as bright as the pool above, except for some strategic voids and a milky vertical strip on the pedestrian street elevation, hiding from the outside view vertical ducts and cables exposed inside. Pink has a neo-classical pedigree in Brazil (it was a favorite for the facades of Brazilian houses during the nineteenth-century imperial period) and carnivalesque overtones when combined with green (green and pink are the colors of Mangueira, a nationally famous samba school from Rio).[5] The curtain wall reflects the adjacent commercial galleries, but it does so by distorting them, echoing the mirrored maze in an amusement park, and yet, inside, everything is transparency, in the best modern tradition of the free plan and the free facade: freestanding columns dialog with autonomous walls defined by the functional logic of each floor. The triple-height balcony prolongs and contrasts the spacious and low-ceilinged lounge on the fourth floor. Integrated to the sports sector on the ninth floor, the double-height balcony is equipped with a climbing wall. The balcony on the pool garden is also double-height but recedes to allow for a reflecting pool that doubles as a foot basin and extends along the two frontages. Equally significant is the horizontal slit that interrupts the curtain wall at the fourth-floor lounge, exposing to the streets a substantial part of the outer columns. The benches and tables designed for this space respond well to its rather small height; resembling couches, they invite people to recline and lie down, in contrast to the nearby balcony. Sheet metal and tubular steel furniture are one of the highlights of the project, and its lightness is one of the points of contrast between Bo Bardi's and Mendes da Rocha's designs for SESC. Instead of terribilità, poise and a certain nonchalance are his weapons, and urbanity needs them too.

4. Dissimilarities and similarities

SESC Pompéia and SESC 24 de Maio also reflect the distinct temperaments of their authors. Pompéia, predominantly introverted, offers warm materiality and does not avoid figuration. It accepts the procession of regular freestanding columns but prefers the uninterrupted space of a room limited by powerful walls. 24 de Maio appears cool and smooth in its abstract hue and extroverted attitude. Bo Bardi sympathized with Louis Kahn, while Paulo Mendes da Rocha operates within the Franco-Brazilian

tradition of the free plan fashioned by Le Corbusier and Costa and Niemeyer as well as Vilanova Artigas (1915-1985). Bo Bardi celebrates with an earnest face the industrial vernacular as well as popular culture and the role of bricolage within it, all the while claiming that hers is architettura povera, the equivalent to arte povera. Mendes da Rocha's attitude in his late phase seems to owe something to the ironic interest of Robert Venturi (1925-2018) in the commercial vernacular, and to pop artists' play with mass society icons too; one should not forget that São Paulo's 9th Art Biennial (1967-68) became known as the Pop Art Biennial, and the subsequent conversion to pop art of several Brazilian artists formerly associated with the Concrete Art movement.[6] Heroism is absent at SESC 24 de Maio, except maybe for that hybrid rooftop structure. Most of the time, the architect avails himself of ready-made rather than made-to-order elements that were intended to prefigure a new social order. Nevertheless, virtuosity in the manipulation of an erudite language in both cases coexists with deliberate demonstrations of awkwardness, either naïf traits that explore the potential connection of children and reveling crowds with the marvelous, or kitschy references that make fun of the disenchantment with industrialization once idealized.

Otherwise, the SESC Pompeia has 23571 sq. meters of built area in a site of 16573 sq. meters; floor ratio is 1,44. SESC 24 de maio has 27903 sq. meters of built area in a site of 2203 sq. meters; floor ratio is 12,66.[7] At SESC Pompeia, the freestanding new towers are juxtaposed to a sector in which the occupation of the lot is intensive but low-lying, lighted and ventilated from above. The combination of mat building and small towers is at once traditional and unexpected, but it feels real rather than utopian. At SESC 24 de Maio, the ratification of the almost complete occupation of the site and the corresponding urban block amounts to a critique of the office building floating in open space as a universal solution, as Costa had already done with the Brazilian Jockey Club Headquarters (1957-1972) in Rio de Janeiro and Clorindo Testa with the Bank of London (1968-1968) in Buenos Aires. Both SESC units react against the reduction of architectural and urban typologies to a few formulas, at the same time they challenge the fetishization of open uninterrupted space and free barrier-less ground. Like the Georgian squares in London, they are closed, and no less useful for this.

Both units promote the covered plaza as an architectural and urban typology, a fruitful species of new public space, and they combine it with the more conventional open variety. At SESC Pompéia, the covered plaza is preceded by the entrance court and connected via the internal street to the boardwalk and adjoining the sun-bathing area fronting the towers. At SESC 24 de Maio, the covered plaza unfolds in three levels, a different stage from each ramp slope or landing. Downstairs it is no more than an expansion of the street. Then it becomes intimate, despite the triple-height balcony. Further up, at the pool garden, it shows itself witty, where the rectangular foot basin contrasts with SESC Pompéia's curvilinear reflecting pool, and the square rooftop structure reveals the obliqueness of the lot. The rooftop proper is the connected open plaza charged with explosive quality by multiple, receding layers of megalopolitan construction that both delimit and expand the view on all sides of the square pool and terrace. In the end, SESC 24 de Maio is also a citadel.

Both units choreograph movement through their spaces to orchestrate a crescendo of emotions. The spectacular view of São Paulo downtown at the rooftop of SESC 24 de maio is the climax of a promenade architecturale that starts with the ground floor expansion of the street and continues upwards using the ramps- with eventual stops at the upper plazas signaled by the absence of partitions. At SESC Pompéia, the internal street is the connecting link between the two plazas, but the counterpart to Mendes da Rocha's rooftop is to be found in the succession of views unfolding at the sports courts when the profiles of the city and surrounding mountains are framed by those irregular holes. In the end, both Bo Bardi and Mendes da Rocha embroider an elemental tripartite narrative without masking it and that is incredibly fulfilling; organized as a recognizable if richly articulated string of precincts, the insides of their activity centers appear memorable.

Concurrently, both SESC units distinguish themselves from their neighbors evidencing their special program with considerable subtlety. The balconies, the slits, and the operable windows of SESC 24 de Maio match the exotic fenestration and the irregularly spaced balconies of SESC Pompeia, contrasting with the common curtain wall in the former, and the common silhouette of the sports towers in the latter. Last but not least, technology is for both architects a resource. There is nothing mean or every day about the 40x40 meters waffle slabs of Bo Bardi's sports tower, nor about Mendes da Rocha hybrid rooftop structure; the latter is completed by a central opening and duct in the swimming pool, which both communicates the pool with the pool garden below and acts as the opening for the smoke detection system in the whole building.

5. Conclusion

The favorable press coverage of SESC 24 de Maio has been confirmed by the numerous enthusiastic visitors. SESC Pompeia remains a popular venue, much praised by the cognoscenti at home and abroad. Both units show that the complex social and esthetic values of modern architecture are alive and well as far as the SESC project is concerned. The activity centers of Bo Bardi and Mendes da Rocha testify to the vitality of those values. Each extracting poetry out of the ordinary in different ways, "hot" Pompéia and "cool" 24 de Maio corroborate that modern architecture is a tradition made up of different strands and traversing different phases, far more positively engaged with the existing city and disciplinary history than its detractors assumed. Formally hybrid and evolutionary rather than pure and revolutionary, they validate the need for good architecture instead of a new architecture every Monday, as Mies aptly remarked. To boot, they demonstrate that even outstanding architecture depends on enlightened policies and efficient administration to be experientially successful- although this is not the object of this paper.

To conclude. another common feature of SESC Pompeia and SEsc 24 de Maio signaled at the beginning of this paper needs to be emphasized. The partial reuse of an existing ordinary structure is key among the continuities that can be detected behind the differences across time and space. In both cases, the bold introduction of new material qualifies the old fragments: enclosure, roof structure, and lines of concrete beams and columns in SESC Pompeia; an independent skeleton in SESC 24 de Maio. Temporality is less obvious in the latter, but keen observes will notice the discrepancy between the old diagonally symmetric independent skeleton, which answered to the corner situation, and the powerful new columns, which evoke a blown-up Roman tetrapylon- not to mention the presence of steel structural elements hardly used before 1990. If a monument is etymologically defined as a machine for commemorating a person, idea, event, institution, those activity centers celebrate the very transformation of their initial ordinariness into exceptional civic equipment, and both SESC Pompeia and 24 de Maio do it by spousing an epicurist ethic that democratically values simple pleasure. Coherently, the earlier described promenades architecturales end pointing out to unmistakably new elements, the tower for Bo Bardi and the rooftop structure for Mendes da Rocha. If both architects reject the tabula rasa approach to renewing the city, they also problematize the ongoing trend of conferring heritage value to every vestige of the past, irrespectively of its qualities. In these cases, it is their very modern intervention that changes lead into gold.[8]They talk the talk and walk the walk to show architecture matters.

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Notes

1 See Fernando Serapião, ed. "Sesc-SP Arquitetura" and "Sesc-SP Architecture." in *Monolito* 33, São Paulo: 2016
2 Marcelo Ferraz, ed. *Lina Bo Bardi*. São Paulo: Empresa das Artes, 1993; Marcelo Ferraz et al., eds. *Cidadela da liberdade. Lina Bo Bardi e o SESC Pompéia.* São Paulo: Edições SESC, 2013; Zeuler Lima. *Lina Bo Bardi*. New Haven: Yale University Press, 2013; Olivia de Oliveira, ed. "Lina Bo Bardi. Obra completa/built work." *2G* 23-24, May 2003.
3 Ruth Verde Zein. "Fábrica da Pompéia para ver e aprender." *Revista Projeto* 92, October 1986.
4 Rosa Artigas, org. *Paulo Mendes da Rocha. Projetos 1998-2016*. São Paulo: Cosac Naify, 2007; Daniele Pisani, ed. *Paulo Mendes da Rocha. Obra completa*. São Paulo: GGBrasil, 2015; Eleanor Beaumont. "Social climber: SESC 24 de Maio cultural centre in São Paulo, Brazil by Paulo Mendes da Rocha and MMBB Arquitetos." *The Architectural Review* 1465, October 2019.
5 According to Sonia Nara Mascarello. *Arquitetura Brasileira: elementos, materiais e técnicas construtivas.* São Leopoldo, RS: Universidade do Vale do Rio dos Sinos, 1982.
6 The United States exhibition included works by Robert Rauschenberg, Jasper Johns, Andy Warhol, and Roy Lichtenstein. See the Bienal de São Paulo website for further information.
7 FAR between 9 and 12,99 includes SESC Paulista (13) and 24 Maio. FAR between 5 and 8,99 includes SESC Pinheiros (7,44), Consolação (6,09) and Vila Mariana (4,84). FAR between 1 and 4 includes Pompéia. and Belenzinho (1,55). The complete list comprises SESC Belenzinho, Birigüi, Bom Retiro, Campo Limpo, Carmo, Consolação, Interlagos, Ipiranga, Itaquera, Paulista, Parque D Pedro Ii, Pinheiros, Pompeia, Registro, Sant'ana, Santo Amaro, Vila Mariana and 24 de Maio.
8 An idea first suggested by my colleague Ana Carolina Pellegrini.

Image Captions

Fig. 1. SESC Pompéia. Aerial view at the dedication. Photo SESC Archive
Fig. 2. SESC Pompéia. View from the sports courts. Photo Nelson Kon
Fig. 3. SESC 24 de maio. Aerial view. Photo Rodrigo Argenon. Wikimedia Commons.
Fig. 4. SESC 24 de maio. Ramps. Photo Maria Eduarda Comas..

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Enclaves of civilization

Modern monuments of Lina Bo Bardi and Oscar Niemeyer in and against the metropolis.

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Abstract

Lina Bo Bardi and Oscar Niemeyer were responsible for two pairs of paradigmatic modern monuments in the history of architecture in Brazil, which marked the urban transformations that took place in São Paulo during its process of metropolization. The building for the São Paulo Museum of Art -MASP and the Ibirapuera Park Complex, both designed in the 1950s, as well as the SESC Pompéia and the Latin America Memorial, both designed between 1970s and 1980s, were respectively built in relatively similar locations, too. These recurring coincidences result in a unique opportunity for comparative analysis of different theoretical trajectories, in significantly similar urban and historical conditions.

The notion of "Liberal Monument" defined by Alexander D'Hooghe, allowed to update the interpretation of these works and to put them in perspective with similar international cases. From this theoretical context, it was important to analyze these architectural masterpieces together with their respective urban contexts, in a unitary manner and in accordance with Pier Vittório Aureli's notion of 'absolute architecture', who understands the very autonomy of architectural form, its ability to separate and being separate, as an essential condition of the city.

In this way, during the heroic period of national modernism, the first two monuments defined new distinct metropolitan centralities in still suburban areas of the city of São Paulo and expressed the liberal values of an elite that addressed the masses despite distancing itself from them. At the end of the century, surrounded by the postmodernist debate and in the midst of the transformations of late capitalism, peripheral monuments reorganize obsolete industrial suburbs and, in this case, the projects are more radically distinguished and the impasses between action and representation, symbolism and abstraction result in changes in the theoretical paradigms of the relationship between architecture and the city.

Keywords: Lina Bo Bardi, Oscar Niemeyer, Modern Monument, Theory of Architecture

1. Odd objects, Even events

The modern monuments that we will compare here are very coincident works from the point of view of urban history, but very different as architectural objects. These differences in form, scale, and program, seem to have prevented a comparative approach to these works and indicate a certain separation between urban and architectural history and theory. This relative mismatch indicates how the comparisons can lead to different results as we consider architecture as separate data from the city's history.

A point that stands out in the theories that deal with the relationship between architecture and the city from the mid-20th century to the present is a persistent need to differentiate the city from urbanization. This apparent paradox came to light through critics of the modern movement. In this sense, a group of works that we can consider as postmodern critic started favoring the term “city” to refer to urban material and historical facts, instead of referring to an idealized notion of urban space, to be formulated by urbanism and made possible by the progress of the productive forces, in the form of urbanization. Since then, it has become clear that urbanism at that time was not based on an understanding of the city, but on overcoming it. So, the city reacted.

Between 1988 and 1995, Otília Arantes critically analyzed architectural theories that pointed out to a transition from “modern universalism to post-critical regionalism” and started referring to her conclusions as “Ideologies of the Public Place”, that is, supposed antidotes against the negative effects of urbanization and "public decline", but which already proved to be an effective instrument for renewing urbanization on new economic and political bases.[1]

Such worries coincide with Aureli and D'Hooghe's interpretations about the political character of the modern city and its monumentality issue. The advantage of analyzing their works from the period after 2008 in light of the theoretical Brazilian production is the possibility of unprecedented actualization of these themes with the purpose of filling the gap of the period known as post-critical.

2. City of enclaves

It becomes clear in the work of these authors, two absent elements in Arantes’ critic which respond to certain hypotheses that, at that time, weren't evident or didn’t seem viable.

The first refers to an important metaphor of the archipelago as a critical synthesis of the contemporary city paradigm, so important to Aureli’s theory[2]. The main element absent from Arantes' theoretical trajectory and essential in the author's argument is precisely the contributions of Rem Koolhaas who, based on the theoretical synthesis of "city as archipelago" by Oswald Mathias Ungers[3], translates in its “The City of the Captive Globe” one of the most eloquent syntheses of modern urbanization.

Koolhaas’ theoretical construction, especially in “Delirious New York”[4], helps us to overcome an ideological aspect of architecture historiography, which presupposes the Modern Movement thinking as the only one or main theoretical ingredient of modern urbanization, confronting Metropolis and Modernist City as different aspects of modernization. Synthesis comes, then, with The City of Captive Globe, where the two models merge into the general rule of “maximum control for maximum uncontrolled”, which defines in that way the concept of the contemporary city as a homogeneous sea of enclaves, all of them potentially monumental. The logic of modernist formalism as an ideal complement, rather than a negation, to the homogeneity of urbanization.

The second gap refers to the hypothesis of seeking, in the very inconsistencies of modern architecture, the paths that led to its overcoming, as an alternative to a generalized critical denial against a supposed cohesive ideological matrix that almost always tends to the fatality of the end of the line, end of architecture, end of the city, in other words, a melancholy negative of the end of history. To that purpose, an analytical effort is needed to differentiate projects instead of making them coherent, in order to reveal the ideological matrix as a process of constant dispute.

For all authors, the notion of the enclave is a conceptual scheme that elucidates this understanding of urbanization and the role of architecture in the production of the city. The concept of enclave coincides with the conclusion Arantes presented, quoting Frampton, about architecture’s attempt to recover “public place” as an antidote to urbanization. “Por mais que variem as soluções […] parece que um ponto em comum os une: a estratégia subversiva de enclave urbano”.[5] However, differently from the supposed “public place”, or the idea of *Heart of the City* as liberal “centers of resistance” as D’Hoodge recovers from Modernist repertoire, Aureli’s argument reinforce the compulsory character of the enclave as a generalized and inescapable resultant of urbanization itself.

> The enclave can be understood as a direct consequence of the economic mastery of capitalist accumulation because capitalism always connects and integrates the urban territory when it must absorb, exploit, control, and organize labor and transform it into profit; but it also always segregates when it comes time to accumulate and distribute that profit.[6]

In this way, the idea of the city as a resultant from parts dialectically in contrast, in higher or lower degree historically verified, would have been being threatened by the political-economic regime (liberal capitalist) of urbanization, through its inclusion/exclusion or integration/segregation logic. This logic would have been converting the “confrontation and its solution - coexistence - into the indifference of cohabitation, which indeed is the way of living in urbanization.”[7]

The fact that enclave has been considered an alternative to urbanism (modern or modernist), instead of a constituent, is due to the fact that Enclave and Urban Marks are not relevant aspects in urbanization theories’ origins.[8] At first sight, these “side effects” seem to contradict the homogenizing logic of urbanism and functional city first ideas. Yet, from the Manhattan example, Aureli shows, through Koolhaas’ analysis, that repetition and differentiation are complementary elements of a predominantly homogenizing but pluralist logic; fragmented but integrated system, present since the early days of Manhattan’s metropolis.[9]

Enclaves and Landmarks, therefore, were intimately integrated through urbanization general effect, which generalized enclave and banalized monumental condition, converting its isolated presence into an ideal liberal condition of private urban lots or, in other words, the maximum emancipation of property from its social function – or form.

3. São Paulo and it's double

What we intend to reflect from the comparison of the works of Lina Bo Bardi and Oscar Niemeyer, therefore, is how their works responded to the conditions of isolation that the modern urbanization of São Paulo imposed on their projects and how they began to configure the city in different ways.

São Paulo consolidated its metropolitan condition in the 1950s. Until then, we can imagine the city as a great mosaic of novelties, a glimpse of Aldo Rossi`s analogous city. Since the end of the 19th century, new urban areas agglomerated themselves around the little old town, and new architectural achievements accumulated over the irregular geography of the surrounding. The general view of the city was not yet taken by the characteristic vertical urban sprawl. American Towers share spaces with churches and parochial squares. Suburban neighborhoods contrast with workers’ villages. Monumental railway stations get exceeded by modernist experiments. Preste Maia’s *Plano de Avenidas* (*Avenues Plan*), from the 1930s, is the most ambitious urbanist effort to convert the plurality excess into cohesion, reducing the city to a didactic radio-concentric diagram.

Despite the declared favoring traffic, the plan conciliated urbanism and the city. That is because the radio-centric system of avenues is a grid converted into its opposite. Though establishing a formal pattern of infinite reproducibility, different from the grid, it overloads symbolically and compulsorily the oldest occupation area in the city, its historical center, ensuring relief from history’s burden to all else.

But the target of the *Avenues Plan* was modest and not very original. The city center actually absorbed all architecture and urbanism’s new features and in the 1940s manifested already all the expected and reinforced overloading by Prestes Maia’s plan. Beyond the center, the city spread, but in a different way than presumed the radio-concentric system. Little by little, the generality of the plan adapted itself to social structure. Even the city geography, a traditional hierarchical mark of colonial urban nuclei, imposed itself under and over the avenues coplanar network. In addition to the tendency of generic and continuous expansion, typical of urbanization, the city imposed itself as much for its material base and its time transformations as for its need for representation of its social structure and historical conflicts.

The linear ridge of the hill that defines *Paulista Avenue* not only divides the two basins of the main rivers in the city but also divides two versions of urbanization at that moment.

On one side of the hill, the verticalization fertilized in the historic center of São Paulo began to spread unrestrictedly over most of the surrounding regions, following the logic of maximum production and reproduction of private urban land, limiting escapes to this model. On the other side, clearly in contrast, the *Bairros Jardins (Garden Neighborhoods)* were establishing themselves “outside” of what until then was the city, as an alternative for the elite and middle-class consumers to the congested reality of the dense city and its industrial areas.

In spite of being different, they are two faces of urbanization. If verticalization represents the maximum land production for the masses (congestion), the suburban lot represents the maximum land valorization for the elites (expansion and speculation). A valorization that allows the property to be unproductive in this case. *Paulista Avenue* was the formal element that better represents the dividing line that separated the masses’ city from the new elites’ city at that time, also because of its eloquent geographic disposition. The city, therefore, is neither a result of one nor the other model, but of the way how urbanization adapts itself and reproduces itself through friction with those particular geographical and historical conditions.

In relation to the analysis objects, MASP was built in the middle of *Paulista Avenue*, just above the tunnel that connects the two valleys and which linked the historic center to the *Jardins Neighborhood*. If the linear ridge of the avenue were a mirror, the I*birapuera Park* would be the reversed reflection of the old town. Instead of a dense, diversified, crowded, and chaotic acropolis, the park offered a bucolic view where a harmonic architectural composition dominates the landscape. In this way, these modern monuments combine and update the identity of the new urban, political, and entrepreneurial elites with the old traditional elites, in a new version of the city.[10]

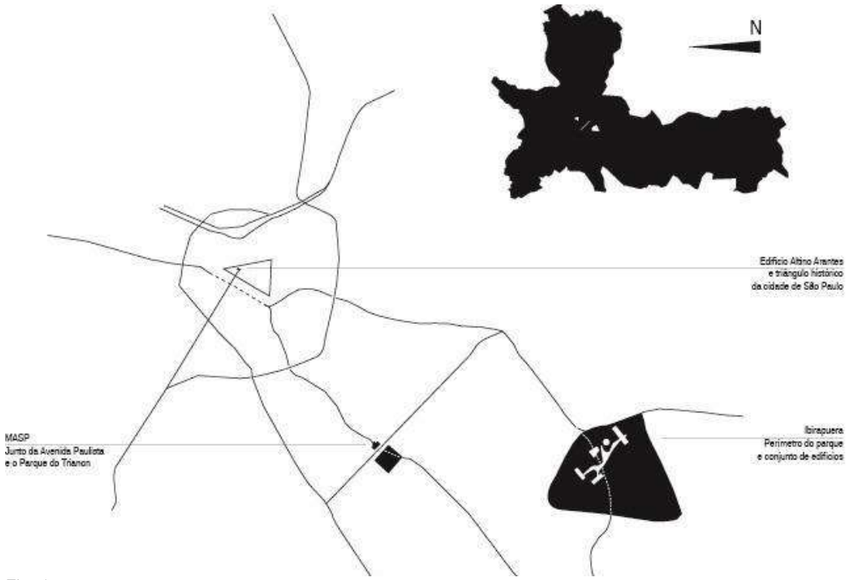


Fig. 1

4. Brazilian Liberal Monument

In these terms, *Ibirapuera* not only excited the monotony and ensured the appreciation of *Jardins* neighborhoods (as planned in Plano de Avenidas), but also served as an idealized reflection of the historical center, where the political elites could see themselves better, together with aristocratic neighborhoods, in opposition to the “old” center, taken by verticalization, congestion and, in a way, by working class. If in the celebration of the Fourth Centenary of the city, which motivated the construction of the park, prevailed the civilizational role of State and elites through its modern cultural institutions and its nostalgic monuments, the representativity of the park as a civic and political center was reinforced in the years that followed with the transference of City Hall to one of Niemeyer's pavilions in 1961; the construction of São Paulo State Assembly neighbor to the park in 1968; and the occupation of some buildings of the architectural complex by the State bureaucracy.

However, following Alexander D'Hooghe proposition, this modern archetype of civic center does not have only a local motivation, but it is involved in the context of the debate about the monumentality in Modern Movement after the Great Wars, which the author denominated *Liberal Monument:*

> “The formal innovation of the Liberal Monument is the Group, a template for discrete interventions, to be multiplied and distributed in the sprawl as centers of resistance against this homogenizing field, and in stark contrast to it.”[11]

This debate, therefore, has implications in urbanistic principles that started guiding the modern movement from the revision of the functional city presuppositions. Also defined by the term *Core*, this template was characterized by “a series of precisely circumscribed figures of publicness in the background of a (dis)urbanizing, privatized territory”[12]. In other words, the relationship between various objects that compose the complex express in an eloquent and idealized way a representation of liberal democracy, with a configuration of free spaces between buildings, that is to say, a reproduction of the city’s own image as a metaphor of democracy.

In this way, the contrast between privatized suburb and public core, according to D’Hooghe, explicit an analog worry of liberal theory in the context of emergency of mass societies in which the principle of representation gain relevance over the principle of democracy and against the risk of majoritarianism, the authoritarianism of the masses (in that time represented by war and anticommunist propaganda). Still, according to the author the urban sprawl was understood then as a manifestation of this authoritarianism of majority and these Liberal Monuments would thus be centers of resistance against urbanization, which principles the own modern movement had helped to diffuse, now with the ambition of restituting a threatened public sphere.

Ibirapuera, however, exposes a specific ambiguity of the Brazilian case. According to D’Hoogde, the projects of cores elaborated by José Luis Sert sought to favor the density in contrast with suburban

monotony. In the opposite way, Niemeyer resonates the bucolic, the low density, and the horizontality analog to the *Jardins* neighborhoods around the *Ibirapuera*. D’Hooghe identified a bond between Sert’s solution and the political-philosophical conception shared with liberal thinker José Ortega y Gasset, who understands the city as a civility expression, as a human willingness attitude of separation from nature.[13]

In this case, the position contrasts with another political-philosophical perspective represented by Jeffersonian American thinking, whose conception, of Enlightenment roots, links nature and enlightenment, and grants to nature’s representations the social virtues and, consequently, the city as a potential source of addictions that threaten social life.[14] From these foundations, also derive two conceptions of State. The first understands it as part of society and supposes the participation and alternation of agents in balancing social conflicts. The other prescribes an isolated State in an ideal situation of neutrality under the constant menace of corrupting itself throughout blending in mundane and private matters.

It is on these terms that one can establish the resonance, not only formal but also philosophical between *Ibirapuera* and its immediate neighborhood of *Jardins*, legitimate heirs of anti-urban thought of Garden City, advocated the negation of the city as a solution for urban problems. In this way, Nationalism and Internationalism (or Bovarism), tropical particularism, and universality of nature blend and confuse one another.

In this way, the *Ibirapuera Group* preserves within the metropolis a Corbusian version of the functional city, with the same idealized spatial principles of urbanization, which prioritize the free form of objects in the infinite continuity of the supposed public space understood as “open” and “free”, represented by nature and integrated by infrastructure (marquee). The five buildings in the Group are not related to or interfere with each other, nor do they impact the surrounding urban form, in a similar way to the surrounding neighborhoods. Hence, the apparent negative impulse converts into effective adherence, and the idealization of free and open space is neutralized by isolation and distance.

5. Reluctantly Monument

In MASP’s case, it also fits in the definition established by D’Hooghe of *Liberal Monument*, but its way of distinguishing itself from urbanization is different. The transference of the museum from the city center to *Paulista Avenue* involved a series of controversies that concern the occupation of its peculiar land, known to that moment as Belvedere Trianon, a public viewpoint on the top of the hill, highlighted by the outline of a valley that opens itself up toward the center and under a tunnel opened in 1938 to connect the already mentioned *Jardins* Neighborhoods, built around 1920, to the city center.

At the end of the 19th century, the allotment that originated *Paulista Avenue* predicted a similar occupation of big lots with isolated mansions, but with a regular grid, which the central axis is the great avenue, coincided with the plain ridge of the hill. The greatness of the avenue did not justify itself in functional terms at that moment, considering that it didn’t connect occupied or intensely dependent areas yet. The avenue as much as the *Belvedere* defined a collective common space that allowed the old and new elites to dispute and play its social role literally in a formally evident position, at the top of the city.[15]

What happened from the beginning to the middle of the century was the gradual reinforcement, but not entirely foreseen, of *Paulista Avenue* as a new metropolitan centrality, that adjusted the city to the metropolitan scale of the masses and the modern enterprises, as the financial, industrial and communication sectors, that started occupying the avenue from the 1950s when the buildings construction permission torn down the old aristocratic mansions.

As we have seen, this “spontaneous” conformation of the avenue happened in contrast between the intensely verticalized old center, on one hand, and the new bucolic center on the other. The tunnel *9 de Julho*, is the door between these two worlds and Paulista *Avenue*, an exemplary case of the confluence of these two versions[16]. Hence the relevance of the *Belvedere Trianon*, historically reassured, where the city government agreed on building the new *museum* at the end of the 1950s, following Lina Bo Bardi’s project.

Despite this great relevance of the terrain, it is necessary to recognize that the mythic narrative, stressed by Pisani[17], about the project justifications was actually determinant to conceal and dissimulate the explicit intention of providing the monumental and urban character to the building, favoring instead a heroic narrative and quite well-accepted representation of the project as a simple result of legal and functional contingencies. This supposed passivity of the project, as eloquent as it is narrative, hid the dilemma between urban forms and functionalist principles, which proved to be incompatible in this case. Therefore, we can see MASP as a successful failure inasmuch as its original claims were intentionally subverted, that is, its original “technical-functional” principles gave way to a skillful “urban” response, insistently refuted by the architect.

After all, we cannot ignore the fact that the project started from a prototype of what could be subsidiaries units of MASP in other cities besides the capital, which was presented for the first time by the architect as *Museu à Beira do Oceano* em 1951, to the city of São Vicente. The general outlines of this project explicitly refer to the solution to MASP and favor the functionalist repertoire of Modern Architecture, with

emphasis on the structural components and formal concision in a single, pure and orthogonal volume. The choice for this repertoire put the project of Lina Bo Bardi in contrast with the characteristics that distinguish free forms of Niemeyer's architecture. This opposition was getting explicit in that moment through several occasions when Lina demonstrated to adhere with greater or lesser conviction the foreign critics to Brazilian Modern Architecture, above all in the episodes which involved the architect Max Bill.[18] But besides that formal and ideological contrast, the prototype of the little museum as much as the *Ibirapuera* Group share formal independence from the site for being both architectural objects, defined in themselves, at most with concessions to the landscape perspective.
MASP's project dilemma, therefore, starts with the attempt to adapt a reproducible prototype in an urban space exceptionally particular. In other words, to transform a serial object in a singular monument, a technical tool into artwork, a typical dilemma of modern art. But what distinguished Lina Bo Bardi's project from Max Bill's or Oscar Niemeyer's principles was the fact that she relinquished formal autonomy and free form singularity, generating a different type of relation and contrast between architecture and city. The main factor that distinguishes the project of MASP from the prototype which originated it is the rotation of the structures, from transverse to longitudinal. This choice interfered in the coherence of functional principles, that is to say, the efficacy of beams in a transversal position, and started defining the extension of the free span according to the width of the own lot. The height of the free span, then, corresponds to this adjustment of height proportion of the own box, that ended up split to settle the program now distributed in the vertical, at two floors above the span (besides the underground), different from the original prototype. These proportion adjustments from the lot's own measures grant the ground floor the monumental height of the vain, proportional to the height of the box. The adjustment of the building to the space of the lot makes the limit of the object coincide with the limit of the city, without ending it, creating a notion of finitude and of separation, defined by the format of the elevated plan of the ceiling in relation to the platform – part of the building -, that continues but distinguishes itself from the avenue floor; which opens itself to the view but separates itself as a balcony over the city. This characteristic, as well as its functionalist external aspect, approximates MASP to Aureli's interpretation of some of Mies Van Der Rohe's work:

> Suddenly, and for a brief moment, one is estranged from the flows and organizational patterns that animate the city, yet still confronting them. In this way, Mies`s plinths reinvent urban space as an archipelago of limited urban artifacts. It is this emphasis on finiteness and separateness that makes artifacts like these the most intense manifestation of the political in the city.[19]

And we do not need to go far to make the political character of MASP evident, since the spot is literally a socially enshrined place for political manifestations. Yet, it is worth highlighting that Aureli avoids associating this political character to the *Genius Loci* notion and "authenticity."[20] Despite this, the historical accumulation of Belvedere Trianon as a space of representation and visibility is undeniable in the case of MASP. However, the project does not make any literal concessions to these preexistences, in their generic and abstract austerity, nor does it directly represent official political instances of the State. Again, Aureli's words referring to Mies's strategy as a "non-iconical gesture" can be used to describe attributes of Lina Bo Bardi's project:

> A noniconic gesture such as the plinth seems to open an analogical crack in urban space even when it has been totalized by the managerial forces of urbanization. The plinth introduces a stoppage into the smoothness of urban space, thus evoking the possibility of understanding urban space not as ubiquitous, pervasive, and tyrannical, but as something that can be framed, limited, and thus potentially situated as a thing among other things.
> [...]
> Moreover, unlike the wall, a form like a plinth is a frame that does not simply separate or isolates; it also recuperates in subtle ways the difference that the modern city has assumed within its generic space: the symbolic possibility of confrontation.[21]

6. Limits

MASP and Ibirapuera are, therefore, two monuments that coincide from that moment in the formation of a new metropolitan centrality, but which are distinguished by their location; for the way they are inserted in the urban space; and the type of contrast and bonds they establish with the city. In this way, they result in distinct public spaces when appropriated by the public.
Another aspect that unites and separates them is the archetype of the covered space as a defining element of the project. In both cases, these covers are defined as a public space sheltered in the scale of the crowds, but the shape of each one is quite different from the other. Therefore, the comparison here is not based exactly on the plastic difference or on the scale, but on the way, the covers define the perception of the limits between inside and outside, between the general and the specific.

This subtle difference between "perceived" and "experienced" forms seeks to take into account the difference suggested by Aureli between the notion of Form and the concept of Formal.[22] For the author, the concept of formal would coincide with his political conception of "the city as contrasting parts" insofar as the "experience of the limit", that is, of integrity, could be opposed to the ideal of indistinct and limitless urbanization.
In this sense, the Ibirapuera marquee sets up an ambiguous representation of infinite space, which approximates the premises of urbanization, while the MASP free span clearly delimits its interior limit in relation to the city's exterior. These subtle differences and their different locations result in different social appropriations. In the marquee, the dispersed use of space prevails, where differences are suspended and people cohabit a shared space of leisure. In the free span, its well-defined form cohesively shapes even the smallest crowds, who identify themselves as an integral social body that literally stages their "speech" with the city through political representation.
More relevant than saying which would be more or less political or trying to classify and qualify the appropriation of these spaces, what matters most here is to establish differences between the intentionality of the projects and the capacity of cities, over time, to transform these intentionalities into new meanings through the renewal of the urban form.

7. Conclusions

Considering the dynamics between intentions and transformations of the city, we can now look at the late works of these architects in order to point out issues that will serve as conclusions. For various circumstances, both architects designed two projects very close to each other and which can also be framed in the definition of *Liberal Monument*, but in different historical circumstances. SESC Pompéia and Memorial da América Latina offer opportune cases to evaluate the evolution in the work of both architects.
In fact, São Paulo has been profoundly transformed in its transition to contemporary. The metaphor of a city of work and consumption divided by *Paulista Avenue* has multiplied in the urbanization archipelago advocated by Aureli and it will not be possible to define it so attentively here. Suffice it to say that the tide of urbanization has reversed towards the old part of the city, updating the logic of valorization of late capitalism. The area where these projects were implemented corresponds to the old industrial districts of Pompéia and Barra Funda and in both cases, they replaced obsolete urban industrial areas with spaces of great cultural and social representation, again.
The main aspect to stand out refers to the opportunity to compare the same architects, with relatively similar projects in an urban context that also coincides. It is a rare opportunity to be explored and that does not end here. To take advantage of the link with the previous projects presented, we will focus only on the characteristics that suggest a change in the perspective of architects in relation to the way they manifest an idea of the city through their projects.
The parallel between *MASP* and *SESC Pompéia* confirms a predilection and an improvement of the architect's design strategies that subject the architectural form to the constraints of the urban form, not as mere contextualism, but precisely as a monumentalized exaggeration of these urban particularities that instigate the architectural form. This is the case of the two towers of the SESC sports complex and the space not built between them, through which a river crosses, and over which the walkways so characteristic of the project intersect. The limits of these restrictions, therefore, coincide with the limits of buildings, as does the factory as a whole in relation to the city.
On the other hand, between *Ibirapuera* and the *Memorial da América Latina*, at first glance, we could conclude that this is the same strategy as the free forms arranged under the *tabula rasa*, in which the marquee became a platform. However, we can see that the layout of the buildings at the Memorial - in addition to the studies done by the architect - reveals an organization of the sets of buildings along a central axis. The neighborhood relations between the buildings organize the architectural promenade in a sequence of forms and programs along an imaginary street that results in a narrative that is not only epic, as requested by the memorial, but also, in a way, nostalgic for the city. In contrast to Ibirapuera, where buildings have little or nothing interaction, at the Memorial, Oscar Niemeyer seems to want to recreate spontaneity and alignment conditions between the architectural forms that are becoming increasingly rare in the metropolis taken over by urbanization. Despite the recurring criticism of his denial of the city, Niemeyer's synthesis, in a way, results in an artificial and metaphorical version of the city as an archipelago (which even included a short quote to the *MASP* himself)[23], in which the fragments that configure the singular character of cities appear isolated in the boring sea of indifference.



Fig. 2

Notes

1 Otília Arantes, *O Lugar da Arquitetura Depois dos Modernos* (São Paulo: Edusp, 2015), 95. and Otília Arantes, *Urbanismo em Fim de Linha e Outros Estudos Sobre o Colapso da Modernização Arquitetônica.* (São Paulo: Edusp, 2014), 95.
2 Aureli, Pier Vittorio. *The Possibility of an Absolute Architecture*. (Cambridge: MIT Press, 2011).
3 Idem, 177-227
4 Rem Koolhaas, *Nova York Delirante. (*São Paulo: Cosac Naify, 2008)
5 Otília Arantes, *O Lugar da Arquitetura Depois dos Modernos* (São Paulo: Edusp, 2015), 155. "As much as the solutions vary […] it seems that a common point unites them: the subversive strategy of urban enclave". Translated by the author from Portuguese.
6 Aureli, Pier Vittorio. *The Possibility of an Absolute Architecture*. (Cambridge: MIT Press, 2011), 26.
7 Ibidem.
8 Idem, 21
9 Idem, 23
10 Paulo C. G. Marins, "O Parque do Ibirapuera e a construção da identidade paulista" in: Anais Do Museu Paulista: História e Cultura Material, 6, no. 1(1999): 9-36.
11 Alexander D'Hooghe, *The Liberal Monument (*New York: Princeton Architectural Press, 2010), 9.
12 Idem, 24
13 Idem, 27
14 Idem, 26
15 Paulo C. G. Marins, "São Paulo - A avenida Paulista da belle époque: elites em disputa" in: *Cidades sul-americanas como arenas culturais.* Ed. Adrián Gorelik and Fernanda A. Peixoto. (São Paulo: Edições SESC SP, 2019.)
16 Paulista Avenue was predominantly occupied by tall buildings isolated on the lot, a pattern of occupation consolidated by Urban Legislation from 1972. For information on urban form and legislation in São Paulo, see Tatiana Teles, Legislação Urbanística e Forma Urbana. (Master Tesis - FAU USP, 2020), Cap. 1
17 Daniele Pisani, *O Trianon do MAM ao MASP. Arquitetura e Política em São Paulo (1946-1968)*. (São Paulo: Editora 34, 2019)
18 Frederico V. Costa, *MASP e a Cidade.* (Master Tesis - FAU USP, 2017), 108-110
19 Aureli, Pier Vittorio. The Possibility of an Absolute Architecture. (Cambridge: MIT Press, 2011), 37
20 Idem, 40
21 Ibidem.
22 Idem, 30
23 It is the case of the Administrative Building of the *Memorial da América Latina, which has a suspended beam that holds the raised glass box similar to the solution for MASP.*

Image Captions

Fig. 1. Paulista Avenue as a mirror and Ibirapuera as a reflection of the historical center of the city. Map by the author.
Fig. 2. SESC Pompéia, at left, and Memorial da América Latina, at right. Image from Google Earth edited by the author.

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Information Tectonics
A Critical Review of Digital and Hybrid Technologies in Architecture

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Abstract

We can see that information is important in the understanding of space. In digital design process this is relevant due to the abstraction of information in the visual algorithms. This is more relevant when we seek to understand the unfolding of computing in the material practice of architecture. These perspectives demonstrate the necessity to recognize how we produce our architecture algorythm systems and how we stimulate not only new procedural methods of representation, but new concepts of poetics of construction through these informational systems.

The paper aims to establish the new tectonic processes of architecture as cybercultural hybryd phenomenon: a detailed process to generate materiality with parameters and a process to create subjectivity with the algorithmic abstraction. We will establish a critical relationship with the current critiques on information and tectonic expression showing how to occur the transformation of physical space as a systemic paradigm that has cybernetics a relevant field of representation and culture. Here we will address how the process in which architects express their complex geometries generate feedbacks capables to transform virtuality between the physical condition and constructive process. The research starts from a review that took place in the first two decades of the century showing the impact of digital technology and cultural studies in this process of parametrize the materiality.

It is intended to this research to expand the theoretical-practical discussions about digital technology and its impact under the order of information society. The impact is strategies to insert inputs into some logic in a relevant paradigm of architecture, to which software, apps, and programs have become an active reality. Architects see the challenge of using, controlling, and regulating information as a new way of representing materiality. Therefore, this research will outline a field between the buildings as a potential theoretical framework for the tectonic perspective.

Keywords: information tectonics, information theory, digital technology, cybernetics.

1. Introduction

Information is a fundamental element in our society today because we form signs and meanings through formal computational structures that we recognize when giving attributes to representational systems. This signal-human-machine relationship is not merely recent (May 2019), but it has the relevance of our times that must be understood once again. It is important to understand that the information is not necessarily a semantic formalization or construction on data - it is also a cultural phenomenon of the control society and information science in general (Pasquale, 2015). If we are going to trace the references, we already have relevant theories in publications since Robert Venturi and Denise Scott Brown of the beginning of the 21st century (2004) where, mainly, the field of systematization persists as a generic cultural expression of signifying and making signification by the multiple information that it can generate. William Mitchell, (1995) brings the expansion of the digital expression as an anti-consequence of architecture.

Neil Leach (2004), more forcefully than Mitchell, already advocated the poetic relations of form as a digital being, digital tectonics. Rivka Oxman observes in the informational view that not only does building gain informational meaning with its new attributes, but it also has briefly informative aesthetic characteristics over the virtual simulation, that control and displacement this data within the process architectural (Oxman, 2012). Against all these anti-materialist premises culture and social discourse of poetics in their contemporary manifestation have changed, now based no longer on an informed tectonic (that is, the included information), but on an information tectonic itself. Although there are different discursive transformations in this: while the first is placed in the idea of informational coupling (as a result of its exercise) with capitalist justification, the other is established as a tectonic variation of the information.

Information tectonics perceive information both as a context and a concept. As a data scientist or our practice as an architect, it is necessary to go further to a view of the tectonic practice of subjective expression of the author himself in his time (Rakatansky, 2014). Without the information, we would not have the understanding of a contextualized poetic intelligence of past architectures as we see as subversive manifestations, nor would we also see the social formation that architecture brings. Thus, to understand the “information formation’’ in architecture, the criticism starts from the characteristics of the information culture itself, so common to project so that it sees what its poetic limitations are. With it, we can understand more than distinct cognitive processes (from architectural recognition structures to transformation devices), as well as the expression of the information concepts employed.

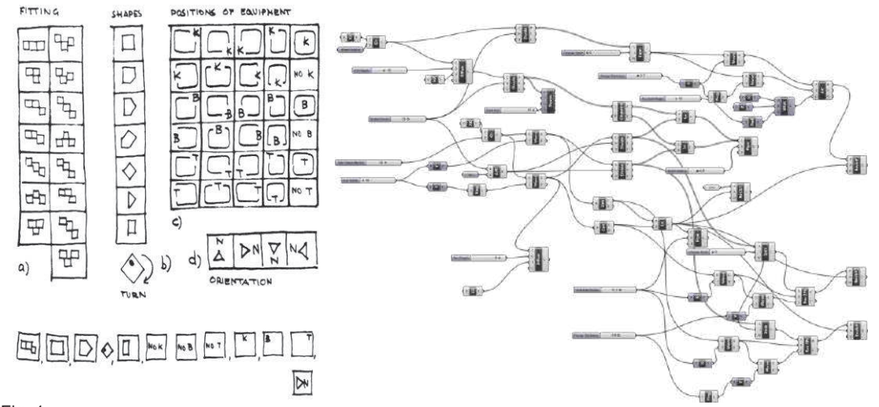


Fig. 1

The goal here is to answer whether tectonics persists as long as poetic information, dynamically displaced as a hybrid and interactive phenomena. This possible transformation always becomes apparent and we know it, but we need to understand where the information generates and what design processes lead to it, not only in the algorithmic logic in architectural poetics but in the conceptual intention present in the objects themselves when we become actors. To this Kojin Karatani stands out as an author who can outline this explicit issue with some of these discursive actions that the information brings to the subject. Thinking about an idea similar to what Max Bense understood as information aesthetics we can dialogue with Karatani to understand what here is a rational displacement - information as poetic then suggests an action of opposites: while it becomes an objective product of a theological action (inform) his poetics exists purposefully by exercising subjectivity over his real function. Thus, the building capacity to formalize in a physical environment instrumentalized in informational logic does the effect of the production of information? We can demonstrate information as a final product, as a mean? Can information be a tectonic act?

‘’Here a question emerges: Does the relation of matter exist in the same way that matter exists? Plato was not only the first to pose this question but the first to answer it: he speculated that relation is an idea, and therefore relation exists only in the realm of ideas. Though it might appear questionable, this speculation cannot be easily dismissed. If the law of nature is understood as an example of the relation of the maker, we might ask, does it follow that this relation exists apart from nature? If it exists at all, where? Modern philosophy sought to locate relation in transcendental subjectivity, and, like Kant, in the a priori form that precedes experience. It was inevitable, then, that those modern philosophers who endeavored to give relation a foundation turned to idealist models, especially given that, as Marx showed, materialism had failed to provide a foundation. In order to deny the significance attributed to the Platonic idea, the ontological status of the relation must be reconsidered.’’ (Karatani, 1995 p. 10)

Producing architecture without thinking about informational consequences may seem unpretentious, but it is, at the very least, a dangerous attitude (Karatani, 1995). The conservative strategy of dating a technical order from time to time, transfigured by a digital envelope to separate from its object, becomes nonsense for denying that technology has its social factor - even communicative (May 2019). It is no longer here to discuss tectonics about this effort but to outline some critical reviews on hybrid buildings. From this perspective, we realize that information emerges as a conditioner and not as a mere catalyst. The idea of information (in formare) here arises in the sense of building architecture as a construction not of data, but information. They are subjective expressions of dynamic space just as our bodies are (Ito, 2011). Thus, we configure the design of the difference by the difference (Foerster, 2000) away from blurred Oxman speculations of the procedures. We will call information tectonics.

2. Information Tectonics

‘’ The word design occurs in the context of cunning and fraud. The designer is, therefore, the malicious conspirator who devotes himself to setting traps. Other terms that are also quite significant appear in this context, such as, for example, the words ‘mechanics’ and ‘machine’. In Greek, mecho designates a mechanism that aims to deceive, a trap, and the Trojan Horse is an example of that.’’ (translated by the author) (Flusser, 2007 p. 182)

Tracing the design idea itself Flusser shows us that, since its disciplinary formation, an interpretive characteristic of information and mechanization. Mechos in greek has broad manifestations. In a halfway remedy or opportunity meaning, mechos is a mechanism - ingenious act, which thus comes close to the constitutions of doric greek machana and Ionian greek mechane, origins of the Latin word machina. Mechos would be the creation of what we understand as systems and machines, which Vilém Flusser, understood to be a concept that shapes the meanings of design - the capture of information about life, nature, philosophy, and its representations (Flusser, 2007). Between the constructive process and the act of inform generating the form has, as we explained earlier, a unique and interpretive open way of meaning. This demonstrates that architecture has been dealing with these structures for a long time since systems permeate the high complexity from the most theoretical formulation (studies of Palladio and Alberti influenced by Vitruvius) to the formulation of modernism (following Christopher Alexander's critiques) always creating subjectivity between materiality. These relationships develop in the form of praxis.



Fig. 2

Generating a system is not merely the creation of the visual algorithm and manipulating information, but understanding which parts are connected to the performance of the whole and designing interaction algorithmically. Take for example the distinction in the creation of the remarkable complex

geometries of Zaha Hadid's Heydar Aliyev Center in comparison with The Broad of Elizabeth Diller, Ricardo Scofidio, and Richard Renfro. While the information in the production of complex geometry in Hadid was the technological necessity of its interpolated construction, in Diller's project the situation is the opposite: his construction process followed its logic. This is also notable not only for the materialization of the building shell but for the structure itself: Zaha Hadid's generic, cartesian and common structural system does not follow its own architectural NURBS logic whereas in The Broad this happens simultaneously. This relationship of simultaneity still occurs in the design process, when we understand a building as a diverse and unified phenomenon of several other systems. To connect these systems and this information, mainly dealing with concepts of information modeling and, more specifically, in today's information culture.

When information becomes part of aesthetics or formal production, algorithmic traces can be seen more clearly than a building that makes parameterization a mere speed for optimizing its construction process (Carpo, 2011). Max Bense, mathematician, and philosopher, perceived this aesthetic process which he called information aesthetics; the poetic condition of the capacity of an apparently objective relationship of information to express some type of analytical diversity (Bense, 2003). We are using science to understand subjective systems, but the question is to deal with the inherently technical subjectivity of information as images as well as dealing with the images themselves as information. For cyberneticists, these processes of interaction between systems and information are called conversation.

‘’We have argued that 21st-century design requires conversation, as well that (in complete alliance with Glanville) design is a conversation. When we say conversation, we mean it explicitly in the second-order sense of recognizing our (subjective) participation in the process of framing and justifying our choices, and therefore our responsibility for it all. If designers are to be responsible for the process of design, we must seek the most effective tools and methodologies—and to document, evolve, and disseminate them into the community of design and into the world of wicked problems.’’ (Pangaro; Dubberly, 2015 p.10)

As stated by Pangaro, projects made of systemic operations are challenges of digital practice as the flow of information expands and becomes more difficult to be perceived - or controlled. In the conformation of techniques and representations of information lies the resolutions of the fundamentals that we understand to be the production of space, be it virtual or physical. It all starts from the information process in the way we understand it (Flusser, 2007), in the validation of the logos, which is a dubious informational process loaded with interpretive signs that makes poetic expression happen. These conversations take place in the interaction of parametric systems (algorithmic or not) when the subject interacts with the information that influences it and its response - whether immediate or not in the case of media structures, the experience makes diversification of these subjective phenomena of the digital experience and material from contemporary architecture.

This logic of an information tectonic is different from a digital tectonic by Claude Chupin or William Mitchell (2005) because it does not have any condition in virtuality that is not itself. The objective of a project is its execution, its discussion before its possible materiality, and much of what has been contributed in recent times with the material manipulations of digital fabrication such as concrete in 3D printing, carved wooden structures, or chitin from Neri Oxman. This informational potentiality deals precisely with the architecture that manipulates the material through systemic processes of stimulation, interaction, and integration with the environment of the subject. This is not a formalistic poetic expression or the enhancement of Mitchell's architectural simulation for example (1998).

From the material systematization, Rivka Oxman called informated tectonics (2012) where material properties are moved to the virtual environment in order to have the ability to manipulate their characteristics, a way to understand the material in an abstract way begins to emerge, materiality tangible where information is a material expression as well. Of course, this came about through parameterizations before projects like The Broad by Diller, Scofidio + Renfro as we listed earlier, but now the relevance becomes similar - disconnecting from a cartesian or separate narrative from the system (as Hadid fatally replied) and bringing possible new potential arising from constructive strategies of performance of direct parameters with the statutes of reality. It is a hybrid to the reality of the object - not just its virtuality (Flusser, 2011).

*‘’ The implications of this for tectonic form are perhaps self-evident, namely the need for human institutions to be integrated with the topography in such a way as to offset the rapacity of development as an end in itself. For Heidegger, the problem with technology does not reside in the benefits that it affords but in its emergence as a quasi-autonomous force that has “stamped" the epoch with its Gestalt. […] Against this misunderstanding that culminates for him in the productionist philosophy of the machine age, Heidegger returns us, like his master Eduard Husserl, to the phenomenological presence of things in themselves.’’ (*Frampton, 2001 p. 22)

The question of technology in Frampton's tectonics is very important to understand where virtuality can go. It is very important (Mitchell, 1998, Reiser; Umemoto, 2006) but it does not detach itself from the materiality of the object - it constructs it. What Frampton does when referring to Heidegger is precisely to come back to us to realize that the consequences of technology are the material perceptions of architecture. This is important to understand virtuality not only in the discussion about what can be proven hybrid (that is, materially connected with the virtual environment) but executed in a hybrid way of numbers and algorithms (Carpo, 2011). We can see this achievement for example in Kunsthaus Graz by Peter Cook or the Dalian Convention Center by Wolf Prix with its variations determined by lighting and external sensing, or even in the parametric facades of Thom Mayne. This expression is realized materially and its structural systems follow its machinic action. It is different from Schumacher's ideas, for example, where there is no concern about tectonic expression except for the apparent form, and not for the architectural space itself. This attempt to understand in a more tactile way the relationship between tectonics and technology in the project idea weaves what Kenneth Frampton had already said decades before when he resumed Gottfried Semper's idea of tectonics (Frampton, 2001) - his role in moving and controlling matter. It is no different from concrete and steel manipulations as in the semperian view of the weaving enclosure



Fig. 3

It is increasingly important to mediate design and space in a more systemic and less cartesian way through the information that the communication of internal, external, social, and natural environments brings us. Using technology in this equation as a conceptual framework - and not necessarily objective, a more conversational system with reality and with an informational poetic expression appears in the light of the project. What we must understand is that we will treat information as a training processor, in a lesser way, as data. If we define information tectonics precisely as the challenging process, we can overcome issues that separate materials and structures from intelligent systems. It is not just a constructive issue, but a matter of conversation between the agency of information that may come to characterize parameters - such as climate, density, and cyberspace.

3. Transforming the Parameters

''In Any case, I am convinced that the task of visualizing the images of the microelectronic era coincides with the aim of designing the dream of the 'garden of microchips'. That is to say, it is a question of producing an electronic vortex in the space of the electronic current, of creating a place of information that will take the place of the genius loci of the past.'' (Ito, 2011 – Kindle Edition)

Toyo Ito denotes this evidence by demonstrating that technology has expanded the human capacity to expand interaction. What happens is that some devices interact more than others, but these expressions are urban or natural. If from the publication of Frampton and its semperian reading became evident to develop better on construction and design in the practice of space construction. Reaction to the theory promoted by Venturi to the decorated shed (Frampton, 2001), the author addresses the physical characteristics of iconic buildings to justify the expression of the process. The project was based on detail and, as it became more apparent with the criticisms of Mitchell, Venturi,

and Chupin, the questions need to be amplified about a systemic condition, which demonstrates the virtual relationship or not between the details and conditions of the city's information.
It turns out, however, that the main development that Frampton says in the preface to Le Projet Tectonique of 2005 by french author Jean-Pierre Chupin is a mea culpa. He admits the certain ambiguity of his tectonic proposal to deal with technology and treats the unfolding of a physical constitution is important, but not so fundamental, justifying himself in the project by the virtual constitution of the materiality process. We perceive an approach closer to the constructive condition in Antoine Picon on the tectonic field in Le Matérialite de L'architecture of 2018, here the experimental questions between materiality and image (Reiser; Umemoto, 2006) are already resolved and Chupin's notes adopted on the digital use manipulation which is placed as a culture arising from the modern resilience of dealing plastically with the dynamics of the material throughout space. We can extend this to the role that we relate the complementary structures with their dynamic efficiency of the relationship between physical space and the environment. It is not just the detail that matters, but also the whole.



Fig. 4

''Like a building or a bridge, for example, an animal must be able to act under gravity as a load-bearing structure. On the other hand, the spatial architecture of an organism is not the only factor that determines its capacity to bear loads, the qualities of the materials making up that architecture also matters: the qualities of muscle that allow it to bear loads in tension, for instance, or the qualities of bone that allow it to bear them in compression. The intensive processes that create these materials are another example of a process of progressive differentiation, one which starts with a population of relatively undifferentiated cells and yields a structure characterized by qualitatively distinct cell types.'' (DeLanda, 2013 p. 58)

This structural question to which Manuel DeLanda addresses in his book Intensive Science and Virtual Philosophy is what the performative narrative (in a cybernetic process) brings to the construction of architecture, it is much more about its development throughout space than its optimization. Absolute Towers show that the direct parameters of the wind performance they generate can generate useful information for a parameter architecture close to the conditions of reality. A parameter really acquires its metric condition when it is linked to its spatial issue and which was programmatically deconstructed. This is very different from the 2000s blob architectures and hedonistic discourse (Lynn, 2014). For this reason, designers who approach virtuality at the expense of physicality argue that dealing with materialism would be a ''distorted idea'' (Mitchell, 1998), but that this is already being deconstructed by systemic architectures, with media bodies, with realistic concepts. Of course, Mitchell with his anti-tectonic speech and even Marcos Novak with his liquid suppression may be wrong, but they are not entirely wrong. They helped virtual synthetic rationality (DeLanda, 2013) in which today we see in the relations of simulation in the architectural exercise with information modeling integrated with engineering and, above all, with the tectonics of information where it is possible to transform information into aesthetic content.

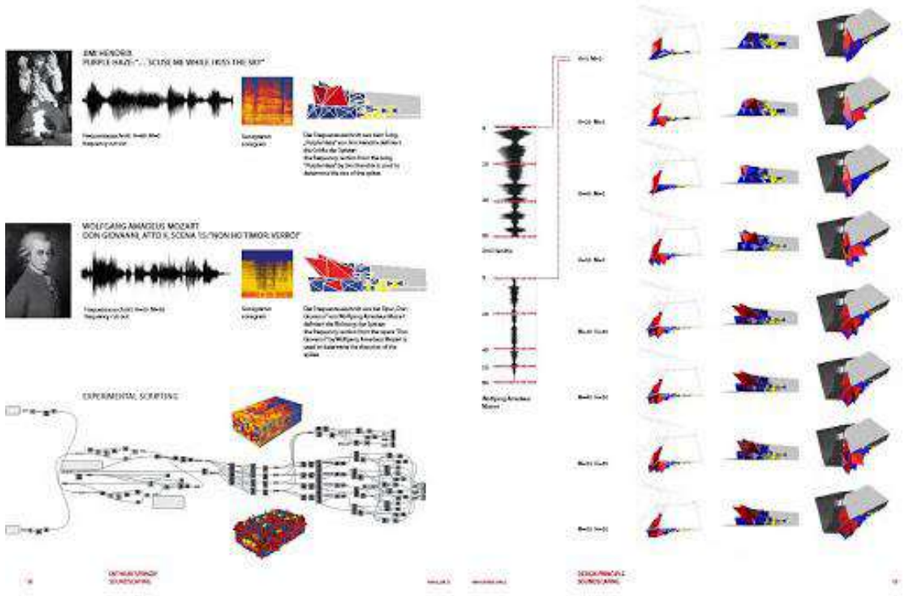


Fig. 5

This displacement of the parameter is something close to what Graham Harman (2018) vaguely says about the process of interaction of objects where hierarchies do not previously exist, but their relationships are important and cause effects among others. When information becomes a parameter, more open and synergistic objects appear, with more receivers where we can manipulate them and generate new content. This does not harm materiality, on the contrary, it enhances it (Hensel, 2013). It doesn't matter if we consider efficiency, density, energy, or subjective values as music, we can treat them as information giving opportunities to input values in the system. This interpretation - that is, the final process of the given-information-parameter logic is to understand how we manipulate the information space itself in material images.

The parametric and the digital can only be understood differently from the modernist views on tectonics - that is, in an informational and systemic way. There would be no other way to connect images in contemporary times like May's (2019) view on imagetic meanings.

4. Final Considerations

What technology was able to show, coming from cybernetics and information culture itself, is that the communicative potential of the material expression of architecture is enhanced when a building is produced systemically. The difference of a parametric structure in a cartesian enclosure is quite remarkable in a building already thought out parametrically, whether it is manufactured by hand by humans or transformed by fingerprints of the parametric blueprint.

What is evident from certain architectural works demonstrated here is that the view of the theory of architecture turns to this informational view of the conception of systems to, finally, have poetic expressions obtained from information from contemporary systems. This is quite constituted after the critical reviews by Leach (2004) and, above all, by Picon (2018), where amplified materiality is shown as a field already of informational manipulation of the material expression that constitutes the tactile reality of architecture. This connection between information is not isolated from reality or from the other systems that make up the building, it clearly appears as a basis for the principle of the architectural process delineated by Semper of material transformation - which is tectonics (Semper, 2004) – now computerized. Informational challenges must be perceived as complex, potential phenomena of digital architectures.

This open system during the conversation with the project is potent in creating an ecological vision (Bateson, 2004) of the design sight, that is, of processes of creating information by difference - and here dictated by the subjective expression of the author's creation before its context. This topological relationship, that is, a complex problem over space, is the sine qua non condition for understanding the effects of convergence, connectivity, and continuity, which are parametric actions on the built systems. For this, we need to consider that a tectonic based on information is a poetic construction of a conversation already latent in contemporary digital architecture.

Image Captions

Fig. 1. Left. Flatwriter. Right. Plug-in ''Grasshopper''.
Fig. 2. Left. Heydar Aliyev Center. Right. The Broad.
Fig. 3. Left. Dalian Convention Center. Right. Kolon One.
Fig. 4. Left. Absolute Towers – Photo. Right. Absolute Towers – Plan.
Fig. 5. Left. Pavilion 21 MINI Opera Space.

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Beds without bedrooms

A comparison of “A summer bed in two compartments” and the sleeping area at the Sea Ranch Condominium

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Abstract

The aim of this article is to explore the concept of privacy associated with the bed by studying a specific piece of furniture: *the bed as a room*. The methodology consisted of selecting and comparing two paradigmatic examples of this concept. The first instance is the design by Thomas Sheraton entitled “A Summer Bed in two Compartments” which features in the book *The Cabinet-Maker and Upholsterer’s Drawing Book* published in 1792. The second example is the sleeping area in the dwellings at the Sea Ranch Condominium designed in 1965 by the architects Charles Moore, Donlyn Lyndon, William Turnbull, and Richard Whitaker. Different aspects of the two cases were analyzed and compared: their constituent parts, their enclosure and location in the room, the layout of the houses they were designed for, and the concept of privacy associated with household space in both periods.

The analysis reveals that the two cases are similar because they are both designed to satisfy the same need: privacy in the sleeping area in the absence of a private room for this specific purpose. Each example consists of space inside another space, beds that have no bedroom and therefore acquire the entity and elements of a room. However, whereas the forerunner of the first instance is the bed, i.e. the traditional, four-poster bed, the starting point of the second design is the bedroom. However, the bedroom in this case is no longer an enclosed space but a piece of furniture whose shape and purpose are more like those of a room. The analysis of the concept of ‘the bed as a room’ prompts a reflection still valid in today’s context because the changing concept of privacy in the household space leads to new lifestyles that inevitably have an impact on the bedroom.

Keywords: bed, furniture, privacy, Sheraton, Charles Moore.

1. Introduction

This paper compares a bed designed by the English cabinetmaker Thomas Sheraton, one of the most influential furniture designers in the latter half of the 18th century, with the sleeping area in the Condominium One units at the Sea Ranch designed in the 1960s by the architects Charles Moore, Donlyn Lyndon, William Turnbull and Richard Whitaker (MLTW).

The analysis highlights the similarities in the two cases arising from the fact that they were both designed to endow the sleeping area with privacy in the absence of a specific room for sleeping. They both consist of space within a space, beds without bedrooms. As a result, the beds themselves acquire the entity and elements of a bedroom. The items being compared are both hybrids between a piece of furniture and a room. Although the first one bears a greater resemblance to a four-poster bed and the second one to an attic in a house, they both have characteristics that suggest they are hybrids between pieces of furniture and rooms. Observing them together makes this ambiguity obvious and helps reveal the similarity between the first item and a small room, and between the second item and a large piece of furniture.

The cases are studied and compared on different levels. The first part of this paper describes and compares the configuration of the two items; the second part compares the characteristics of the places for which the two designs were intended; and finally, the designs are contextualized in the overall panorama, and the concept of privacy in the realm of the household, and the bedroom, in particular, is analyzed in each period of time.

2. Halfway between a piece of furniture and a room

The first item to be compared appears in a perspective drawing of a bed design dated 1792 appearing in plate 41 (Fig. 1) in *The Cabinet-Maker and Upholsterer’s Drawing Book* by Thomas Sheraton. This design entitled “A Summer Bed in two Compartments” consists of a four-poster bed featuring two twin beds. In the caption by the drawing, the author explains that the beds were designed “for a nobleman or gentleman and his lady to sleep in separately in hot weather”[1] and describes how this design is better than others with the same aim: “First, the passage up the middle, which is about twenty-two inches in width, gives room for the circulation of air, and likewise affords easy access to the servants when they make the beds. Secondly, the passage gives an opportunity for curtains to enclose each compartment, if necessary, on account of any sudden change of weather. Thirdly, it makes the whole considerably more ornamental, uniform, and light”[2].
This article of furniture has a tester and is paneled in along one side which constitutes the large headboard of the two beds. At the outer corner of the footboard of each bed stand two columns that support the tester covering the entire structure, and at the inner corner of the footboards stand two slimmer columns joined at the top by an arch with a curtain hanging from it that frames the entrance into the interior of this article. On the other side of this threshold is a space 22 inches wide enabling access to each bed. This gap enables occupants to stand up inside and also provides room for additional objects or furniture such as a bedside table. The decoration on the underside of the tester reflects the horizontal distribution of the twin four-poster into two compartments and features two domes, one above each bed. Hanging from the tester are two pairs of curtains: one around the edge to enclose the entire twin four-poster, and the other to separate each bed.

The second item in this comparative study is situated inside the dwellings in Condominium One at the Sea Ranch designed in 1964 by the MLTW group of architects (Fig. 1). The project consists of ten units each containing “two little houses, one of them a simple four-posted shelter covering a hearth and supporting a bed chamber on top”[3]. In other words, unlike the previous article, the four columns in this structure support an overhead sleeping space, and the area delimited by these columns are occupied by a fireplace. As a result, the bed is situated in a structure that has a floor but no roof of its own. The sleeping area is enclosed by curtains that hang from the ceiling of the room, not the four-column structure. The area in which the beds are located is delimited by banister-height walls and flooded by light from a large, square skylight[4]. Although this room is not closed in, it has single access consisting of a walkway leading to the middle of one of its four sides – a walkway that resembles the access to the other bed under study here.

The architects referred to the structures inside the units as “toy houses and giant cabinets”[5]. In particular, they regarded the actual room containing the bed like a big bed: “The unit interiors were based on the idea of a bed being the genesis of a bedroom. Our bedrooms became giant four-poster beds, two stories high”[6].

The main difference between this sleeping area and Sheraton’s design is that in the former, the bed framework is separate from the four-column structure and can, therefore, be furnished in different ways. As can be seen in the photograph (Fig. 1), this area contains twin beds and other pieces of furniture such as a bedside table, a plant pot, and a chair.

As for the scale of the items being compared, the “summer bed” is about 10 feet (3m) wide by 11 feet (3.3m) high[7]. Its depth is not specified but is about the length of the beds, i.e. around 6-7 feet (2m). These dimensions could be those of a contemporary bedroom and are approximately the same as the area designated for sleeping in the Sea Ranch dwellings.

As for their shape, both examples are reminiscent of small shelters or tents in an indoor setting. Both designs have a structure separate from the room they occupy, devices enabling them to be secluded from their surroundings, an entrance, and room to move around inside. The outcome is reminiscent of a theatre: each article resembles a sort of stage erected inside a room.

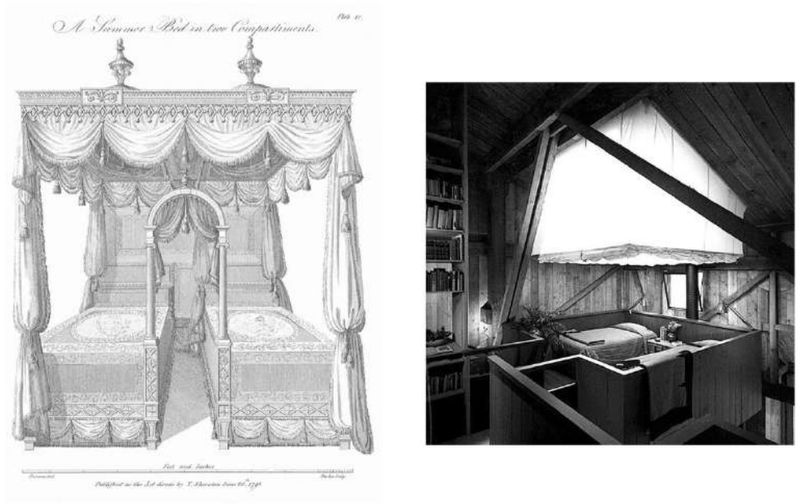


Fig. 1

3. A bed with no bedroom

The configurations of the two items under study correspond to the characteristics of the room they occupy: a multi-use room, i.e. these beds are not located in a private, purpose-built bedroom. In response to the need for privacy in a multi-purpose room, their design involves a format halfway between a piece of furniture and a room.

Sheraton’s design was not actually built, nor was it a project for a specific space. Like those of the other great cabinetmakers of the second half of the 18th century, Sheraton’s drawing-book was a catalog of furniture designs intended as guidance for the workmen manufacturing them[8]. Because the bedroom evolved into a secluded place just for sleeping in the latter half of the 18th century[9], it could be said that Sheraton designed a bed for a room specifically for sleeping. However, its configuration, in keeping with the Classical Revival style of the Adam brothers, evolved from the four-poster beds of the previous style. Although canopies were originally added to beds to keep the occupants warm, they were also intended to seclude them from the many activities taking place in the same room[10]. Medieval dwellings were not private places but public areas bustling with people and a wide range of activities. Work and leisure were part of the dwelling. Despite the multitude of tasks taking place in houses, they still had no rooms earmarked for specific purposes or any private rooms. Against this backdrop, models such as four-poster beds became popular in the 17th century. The public nature of such rooms together with an incipient desire for privacy led to the transformation of the bed into an imposing island, halfway between a piece of furniture and a chamber, inside a room for no specific purpose.

Unlike the great medieval hall, the dwellings in the Sea Ranch Condominium are private. However, the architects refer to each unit as “big rooms”, which suggests a lack of strict compartmentalization into rooms for different purposes. Inside a seamless space, architects inserted another layer of shelter that gives the impression of being even further inside[11] consisting of an aedicule or tester, one of the basic concepts underpinning the work of the MLTW group. The fascination with this structure was accompanied in the same period by the discovery of an essay by the historian John Summerson, entitled *Heavenly Mansions*[12], in which he identified the aedicule as a “little building” with a ceremonial function. In comparison with the big room for many activities, “the bed, atop a four-poster aedicule, was meant to become private by means of canvas drapes that would fold down making a tent”[13].

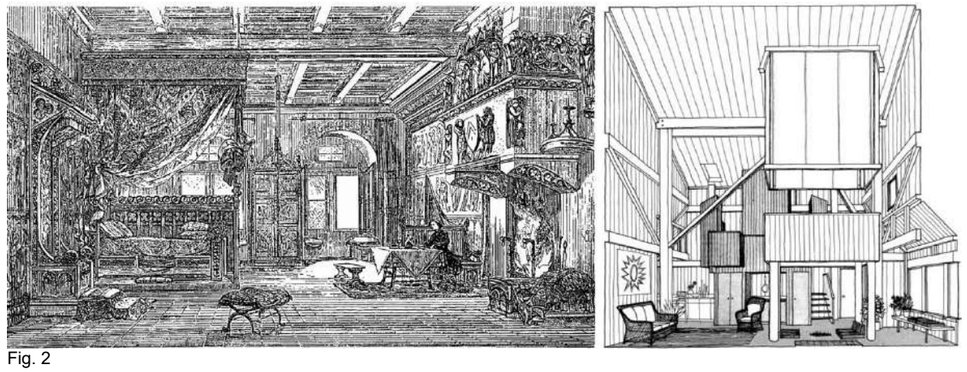


Fig. 2

The same approach can be seen in other projects by Charles Moore, a member of the MLTW group. The Orinda house, designed a few years earlier, has two four-column pavilions inside. Although the beds are not inside or on top of the aedicules (they are located between the two pavilions), they are separated along one side by a large bookshelf/headboard (Fig. 3). The 1965 design of a bed for a house in New Haven is more explicit: it is surrounded by panels on three sides and crowned by the representation of a baroque dome[14] (Fig. 3). These designs enable a greater similarity to be seen between the Sheraton bed under study here and others in the same catalog (Fig. 4), such as “An elliptic bed for a single lady”, “A duchess” or “An English state bed” in the form of small pavilions for sleeping in, inside a chamber.

The designs in both projects aim to create a private space within the chamber. In the present comparison, the relationship established by two of the group members in conjunction with Gerald Allen between the design of one of their beds and the traditional four-poster bed is particularly striking:

“Mrs. George Washington Vanderbilt’s bed at Biltmore house, in the mountains of North Carolina, is, in our special terms, a richly embellished machine, serving one specific function in a place consecrated to a host of unspecific improvisations. Set on a dais and hung with a canopy of purple velvet, it provides the focus for the large room. (…) The dais is a machine domain; the rest is a room in which many unspecific activities can take place. In the remodeled bedroom of a small two-room apartment in New Haven, the bed is a one-piece, multipurpose machine designed to sit in the middle of a tiny space and serve from various sides the activities of sleeping, dressing, working at a desk, and storing away books, papers, and clothes”[15].

In short, the bed is regarded as a multi-purpose machine inside a room intended for no specific activity.



Fig. 3

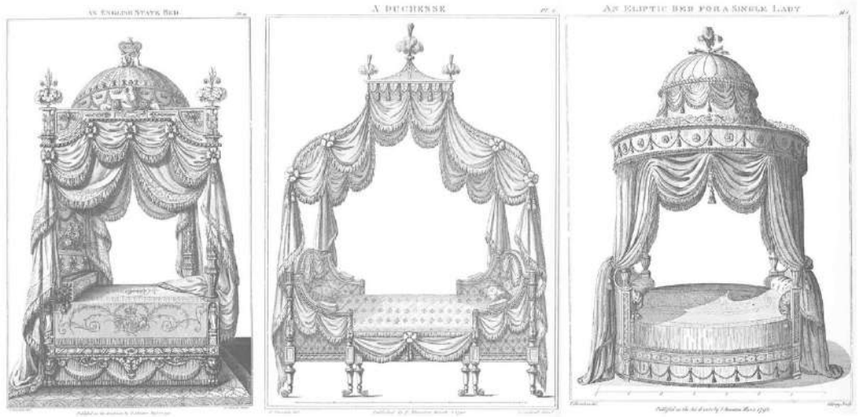


Fig. 4

4. The concept of privacy and the sleeping area

Although the configuration of the bed depends on the nature of the room it occupies, both the bed and the room are a product of the mindset of each era and the evolving concept of privacy associated with the realm of the household, particularly the bedroom, in each period of time[16].

Until the inception of the modern state, the concept of privacy did not exist in the mind of the individual. Work and leisure both took place in the home. The boundaries of urban occupations were also blurred in architecture, hence, despite the multitude of tasks taking place in houses, there were still no rooms earmarked for specific purposes or any private rooms. Between the 16th and 18th centuries, attitudes began to change, and privacy began to prevail in dwellings in western societies. The great hall of the Middle Ages, a public area where all sorts of activities took place, was gradually replaced by more specific rooms where occupations previously related to certain items of furniture were carried out[17]. Although one might think that this lack of private rooms in houses was the result of poverty, it was actually more the result of inhabitants not being familiar with the concept of privacy because even the homes of the wealthiest had no rooms for specific purposes[18].

Industrialization and the separation of the home and the workplace led to houses being split into rooms for different purposes and prompted the appearance of the bedroom. This led to the bed becoming smaller, lower, less ornate, and simpler in shape. The main change was the disappearance of drapes around the bed: an unnecessary feature in beds surrounded by bedroom walls. Virtually no new types of bed were invented in the 19th century,[19] one of the few exceptions being the “Summer Bed in Two Compartments”[20] under study here. In the legend alongside the drawing, Sheraton seems to suggest that it is a combination of a double bed and twin single beds[21]. Consequently, this design was a forerunner of the twin beds in vogue between 1870 and 1970.

The housing crisis that had affected European cities since the industrial revolution worsened after World War I. Many of the minimalist dwellings proposed by modernist architects at the second CIAM, often resulted in smaller homes for middle-class families featuring distinct living areas[22]. In the latter half of the 20th century, improved standards of living caused a shift in the values of modern architecture. New ways of living emerged, and many architects queried concepts such as minimum, standardized dwellings for universal occupants with strictly defined zones for different uses. This constituted a break away from the previous trend of houses divided into rooms for specific purposes. Open-plan homes had an impact on furniture, which then assumed the specific functions of the rooms in the house. This was the context of the Condominium project, the interior of which is organized on the basis of “furniture-like elements housing the specifics (…) and sleeping lofts set on four posts”[23].

Whereas industrialization brought with it the radical separation between the home and the workplace, “post-industrialization collapses work back into the home and takes it further into the bedroom and into the bed itself”[24]. This led to the proliferation of experimental projects created by architects in the 1960s for the new connected nomads, such as “high-performance beds” fitted with media connections[25], i.e. individual capsules or cells created around the globe by architects and designers including the metabolists in Japan, Yona Friedman in France, Archigram in England and Archizoom in Italy, to name but a few. Tiny, transportable units halfway between furniture and buildings such as David Green’s Inflatable Suit Home, Michael Webb’s Cushicle and Warren Chalk’s Capsule home (all members of the Archigram group), or the capsules in Kurokawa’s Nagakin Tower built in 1972, one of the few of these utopian concepts that were actually built.

Whereas the first item is based on a piece of furniture – the traditional four-poster bed – designed in response to a need for privacy inside a room whose purpose is ambiguous, the starting point of the second item is a room – the bedroom – that is no longer an enclosed space but a piece of furniture whose shape and purpose are more like those of a room.

Sheraton’s design takes the traditional four-poster bed to another level by incorporating two twin beds and this was a forerunner of a later trend: the evolution of a specific room for sleeping in. On the other hand, the precursor of the sleeping area at the Sea Ranch was the bedroom which, once released of zoned areas, acquires the condition of a piece of furniture similar to the contemporary designs of capsules like the ones mentioned earlier. Both may therefore be regarded as paradigmatic examples in their respective settings.

5. Conclusion

In the course of history, furniture has expressed the different lifestyles of different societies. The link between furniture and its cultural period makes it possible to pinpoint similarities between items of furniture from different backgrounds and societies due to certain parallels that can be drawn between their lifestyles and ways of thinking. This essay outlines the relationship between the mindset of society, the layout of the house, and the configuration of the bed. Because the parallels are based on the characteristics of the room they occupy, which in turn are associated with a certain lifestyle and concept of privacy, it would be possible to compare many beds from both periods with a hybrid design halfway between a piece of furniture and an enclosure inside a public interior.

The study of the concept of ‘the bed as a room’ deserves more attention now than ever. The architect and architecture historian and theorist Beatriz Colomina put the bed back in the limelight recently in the wake of technological developments: today’s smart bed equipped with cutting-edge information communication technology embodies the mid-nineteenth-century dream of a connected home[26].

Recent progress in information technology and its connection with the bed, the on-going evolution of the notion of domestic privacy in relation to the sleeping area, and the lack of space in urban dwellings have led to domestic space being organized on the basis of pieces of furniture featuring characteristics typical of rooms, have all inevitably influenced bed design.

As a result, the examples analyzed in this article are still valid today because, despite originating in apparently different contexts, they were both created in response to similar needs embodied in complex pieces of furniture that incorporate some of the room’s purposes and constitute one space inside another. Therefore, the reflections arising from the present comparison will undoubtedly generate renewed interest in this sphere in today’s world and also inspire new designs.

Notes

1 Thomas Sheraton, *The Cabinet-maker and the Upholsterer's Drawing Book* (New York: Dover Publications, 1972), 80.
2 Sheraton, *The Cabinet-maker and the Upholsterer's Drawing Book*, 80-81.
3 Charles Moore, Gerald Allen, and Donlyn Lyndon, *The Place of Houses* (New York: Holt, Rinehart and Winston, 1979), 34.
4 Blanca Juanes Juanes, *Sea Ranch, Condominium 1. Estrategias de construcción de lo cotidiano* (Doctoral thesis, UPM. Escuela Técnica Superior de Arquitectura de Madrid, 2017), 154.
5 Moore, *The Place of Houses*, 36.
6 Keim Kevin and Charles Moore, *An Architectural Life: Memoirs & Memories on Charles W. Moore* (Boston, Massachusetts: Little, Brown and Co., 1996), 84 quoted in Juanes, *Sea Ranch, Condominio 1. Estrategias de construcción de lo cotidiano*, 191.
7 Sheraton, *The Cabinet-maker and the Upholsterer's Drawing Book*, 91.
8 Sheraton, *The Cabinet-maker and the Upholsterer's Drawing Book*, 81.
9 Michelle Perrot, *Historia de las alcobas* (Madrid: Siruela, 2011), 38-40.
10 Witold Rybczynski, *La casa. Historia de una idea* (San Sebastian: Nerea, 2009), 50.
11 Moore, *The Place of Houses*, 34.
12 Juanes, *Sea Ranch, Condominio 1. Estrategias de construcción de lo cotidiano*, 179.
13 Charles Moore and Donlyn Lyndon, *Chambers for a Memory Palace* (Cambridge, Massachusetts: The MIT Press, 1996) quoted in Juanes, *Sea Ranch, Condominio 1. Estrategias de construcción de lo cotidiano*, 234.
14 Gerald Allen, *Charles Moore* (Barcelona: Gustavo Gili, 1981), 59.
15 Moore, *The Place of Houses*, 111.
16 María de Miguel and Sentieri, Carla. 2020. "The bed and the bedroom. Two turning points in the western concept of privacy". *Constelaciones*. 2020, 8: 121-134.
17 Phillippe Ariès, and George Duby, *Historia de la vida privada 5. El proceso de cambio en la sociedad de los siglos XVI-XVIII* (Madrid: Taurus, 1993), p.214.
18 John Lukacs, "The bourgeois interior", *The American Scholar*, Autum 1970, vol. 39, 624.
19 Henry Havard, *Dictionnaire de l'ameublement et de la décoration: depuis le XIIe siècle jusqu'à nos* jours (Paris: Ancienne Maison Quantin, 1894) quoted in Gray, Cecil and Gray, Margery, *The Bed; Or, the Clinophile's Vade Mecum* (London: Nicholson and Watson, 1946), 192.
20 Gray, Cecil and Gray, Margery, *The Bed; Or, the Clinophile's Vade Mecum* (London: Nicholson and Watson, 1946), 193.
21 Lawrence Wright, *Caliente y confortable. Historia de la cama* (Barcelona: Noguer, 1964), 231.
22 Pier Vittorio Aureli and Martino Tattara. *Loveless: The Minimum Dwelling and its Discontents (*Milan: Black Square, 2019), 6.
23 Lyndon, Donlyn, "The Sea Ranch. Qualified vernacular", *Journal of Architectural Education,* October 2009, 85.
24 Beatriz Colomina, *The century of the bed*, (Vienna: Verlag fur moderne Kunst Nurnberg, 2014), 19.
25 Colomina, *The century of the bed*, 21-22.
26 Colomina, *The century of the bed*, 21.

Image Captions

Fig. 1. Left. Thomas Sheraton, A Summer Bed in Two Compartments, 1972. From: The Cabinet-maker and the Upholsterer's Drawing Book. New York: Dover Publications, 1972. plate 41. Right. Interior view of the dwelling in the Sea Ranch Condominium.
Fig. 2. Left. Violet le-Duc, Chambre de chateau, 13th century. From *Dictionnaire raisonné du mobilier français de l'époque carlovingienne à la Renaissance*. Paris, Libraire Gründ et Maguet, 1873. Plate 43. Right. Perspective drawing of unit 1 in the Sea Ranch Condominium by MLTW.
Fig. 3. Left. Interior view of a house in New Haven designed by Charles Moore. From: *Charles Moore*. Barcelona: Gustavo Gili, 1981. p.28. Centre. Interior view of Orinda house. From: *The Place of Houses*. New York: Holt, Rinehart and Winston, 1979. p. 61. Right. Interior view of an Apartment in New Haven designed by Charles Moore. From *The Place of Houses*. New York: Holt, Rinehart and Winston, 1979. p. 112.
Fig. 4. Left. Thomas Sheraton, *An elliptic bed for a single lady,* 1972. From *The Cabinet-maker and the Upholsterer's Drawing Book*. New York: Dover Publications, 1972. Plate 1. Centre. Thomas Sheraton, *An English state bed,* 1972. From *The Cabinet-maker and the Upholsterer's Drawing Book*. New York: Dover Publications, 1972. Plate 19. Right. Thomas Sheraton, *A Duchesse,* 1972. From: *The Cabinet-maker and the Upholsterer's Drawing Book*. New York: Dover Publications, 1972. plate 2.

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Fragments of history in Paulo Mendes da Rocha's Chapel of Saint Peter
A reading on its meanings through Hagia Sophia

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Abstract

Few church buildings escape Joseph Rykwert's assertion that "the elaborate and varied forms of church building seem quite often to arise in answer to arbitrary and irrational demands". However, according to the central thesis of Rykwert's book Church Building, "when looked at closer these demands fall into a pattern, and the pattern is legible". What happens if we observe the Chapel of Saint Peter designed by Paulo Mendes da Rocha? A priori, its "elaborate form" lead to confirm Rykwert's first statement. A closer look will be necessary to verify his thesis. We need to examine the work, seeking to identify fragments of history - the "pattern" to which Rykwert refers. Such an operation will allow us to create associations that help us to understand the meanings of the work, so, confronting this object with a second one could therefore be the first step.

The Church of the Holy Wisdom in Constantinople was designed and built by Anthemius of Tralles and Isidore of Miletus between 532 and 537. The temporal and geographical distance between this work and the Chapel of Saint Peter, built in Brazil and conceived in 1987, is remote. However, Hagia Sophia became one of the most relevant works of architecture in history, both for the condensation of a previous tradition and for its contributions to the consolidation of that tradition and the incorporation of innovations that influenced a significant part of later buildings, especially sacred Christian buildings. The comparisons between main solutions adopted in Hagia Sophia and the particularities of the Chapel of Saint Peter seem to confirm Rykwert's thesis and bring light to new interpretations of Mendes da Rocha's work. The confrontation of these two objects thus becomes a fruitful exercise of criticism that makes it possible to highlight the dialogue between the Chapel and history.

Keywords: Paulo Mendes da Rocha, Hagia Sophia, Chapel of Saint Peter in Campos do Jordão, Church Building.

"The elaborate and varied forms of church building seem quite often to arise in answer to arbitrary and irrational demands. And yet when looked at closer these demands fall into a pattern, and the pattern is legible."[1]

These lines of the beginning of Joseph Rykwert's book *Church Building* anticipates which is perhaps the main conclusion of the overflight the author performs along with the history of the architecture of churches. At first sight, the Chapel of Saint Peter, conceived by Paulo Mendes da Rocha in Campos do Jordão in 1987, could seem foreign to any church pattern. It could be seen as the result of the architect's response to arbitrary and irrational demands. It would be enough to think how complex its construction must have been, with the unusual structural design of a single pillar, or the tons of steel needed to support the cantilevered roof, nave, and choir. However, as Rykwert recommends, we will have a closer look at the building to trace a path that could allow us to consider with more convincing what Rykwert proposes. Thus, we are obliged to confront the Chapel with preceding examples.

We will make the first approach to this task through one of these examples, Hagia Sophia. The Church of the Holy Wisdom in Constantinople was designed and built by Anthemius of Tralles and Isidore of Miletus between 532 and 537. The temporal and geographical distance between this work and the Chapel of Saint Peter is remote. However, Hagia Sophia will be useful for our purpose, since it became one of the most relevant works of architecture in history, both for condensing a previous tradition and for its contributions to the consolidation of that tradition and the incorporation of innovations that influenced a significant part of later buildings, especially sacred Christian buildings.

We do not pretend to make an exhausting analysis of the two buildings, much less comprehend them "in their plenitude", which as Ruth Verde Zein reminds us, is a "philosophically impossible task"[2]. We seek to highlight aspects of the conception of Chapel of Saint Peter which could become visible in the light of the design of Hagia Sophia. For this purpose, we will examine the buildings through interpretative analysis of its architecture, as well as consulting primary and secondary literature sources.

1. Celestial Roof

The visitor who approaches the esplanade of the Boa Vista Palace in Campos do Jordão can only have a glimpse of the exposed concrete and glass building beside it. It is the Chapel, standing a few meters away, not allowing itself to be seen entirely. As we move towards, we slowly discover the building: the choir, the nave, and the water mirror over which they float. The last visit I made to the Chapel started with this sequence until I had a disturbing surprise: the water mirror was dry. I thought perhaps that it was removed during a renovation[3], but nearby workers informed me that it was just periodic maintenance. A few moments later, the initial disappointment became satisfaction when I was allowed to walk in the dried water mirror. Thus, I managed to placate the boyish curiosity of walking (almost crouching) beneath the nave and under the choir, places that were usually unreachable to the visitor. The water mirror prevents the public to walk this particular region in which, had access been allowed, the Chapel would have overlaid floors. For this reason, the Chapel is a single floor building. The visitor can never, like I did, look up and not see the roof. There is never any element between the visitor and the roof. The roof of the Chapel is the sky for whoever is inside: the visitors are always beneath it, and it is the only element above their head.

Throughout history, architects concentrated efforts towards developing complex and elaborate proposals to solve the problem of roofing, especially in churches and chapels. No doubt that was the case in the Chapel of Saint Peter in Campos do Jordão, as it was in Hagia Sophia. However, the "sky" in both buildings is radically different. In Campos do Jordão the roof is a perfectly horizontal surface, and in the ancient Constantinople it is conceived as an antithesis: half-domes, vaults, arches and pendentives support a huge dome that dominates the roof. The multiplicity of architectural resources used by the Byzantine architects to exempt the roof of Hagia Sophia from the straight line, and the ingenuity of the construction and structural solutions to make it dynamic and fluid is a stark contrast to the stern and rigorous proposal by Paulo Mendes da Rocha. In Hagia Sophie the roof is covered and dominated by the colors and reflections from the mosaic, adding to the dynamics of the ceilings. In the Chapel of Saint Peter, a single surface covers the interior space, an exposed concrete slab whose texture, resulting from the scars left by the cast, reinforces the nature and qualities of the stone, an opaque, static, and lifeless mass. The roof of the Chapel is a barrier for the sunlight, which becomes impervious[4]. In the opposite direction, in Hagia Sophia the multiple orifices filter the sunlight, making them present as columns of light which invade the interior space, having the dome landing delicately over a ring of windows as the climax.

The building of the Chapel was ordered by Orestes Quércia besides his palace, just like Justinian ordered the construction of Hagia Sophia besides the Imperial Palace in Constantinople. Naturally, the difference in magnitude and relevance in the geopolitical context between the two commissions justify the difference in scale, among many other aspects, but does not justify the austerity of the roof on one building against the voluptuosity of the other.

The conceptions of both seem to emerge from opposite principles. By the characteristics appointed above, we can understand why, by the time of Justinian, the historian Procopius of Cesarea was convinced that everyone who visited the church felt that his heart was lifted to God and he said that this happened not only when he visited it for the first time; everyone gained the same impression as if each visit was his first[5]. On the other hand, the experience described by Procopius would be unsustainable in the Chapel of Saint Peter. If the roof of Hagia Sophia was conceived as a celestial metaphor, to allow the visitor to ascend and meet a divinity that inhabits Heaven, the same cannot be said of the Chapel, where the roof is an impenetrable barrier between the visitor and the sky.

2. Ribs



Fig. 1

Yvonne Farrell and Shelley McNamara (Grafton Architects) exhibited at the 2012 Venice Biennale a model of the Chapel of Saint Peter (Fig. 1). Just like the visitor of the Chapel, the visitor of the Biennale could also imagine, with good reason, that the roof of the Chapel is solid concrete. The visitor in Venice, however, had an advantage over the visitor in Campos do Jordão: its visual horizon was above the roof of the Chapel, which, nonetheless, wasn't very advantageous to perceive much about the structural system of the roof. To see it we must consult the design plans, or be a guest of the São Paulo Government in the unfrequented – at least for this purpose – Boa Vista Palace, which is why few visitors could know that the roof of the Chapel is not solid. For everyone else, the roof seems as solid as in the model of the Biennale. As solid as it was designed in the croquis of Paulo Mendes da Rocha. (Fig. 2)

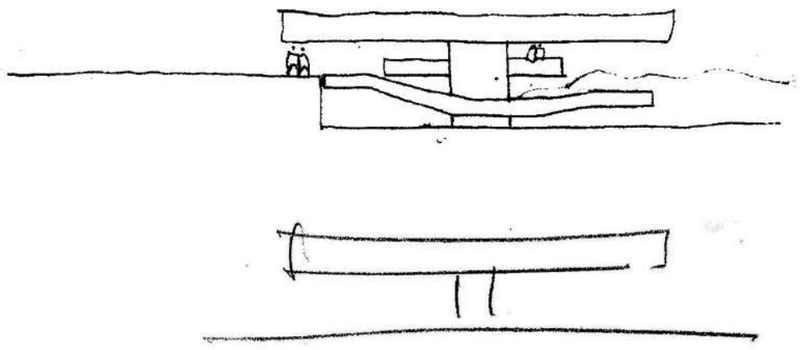


Fig. 2

However, the sparse visitors who could elevate their point of view above the roof can see that it is not solid but rather consists of the main beam whose axis corresponds to the transversal axis of the Chapel and, perpendicular to it, seven beams on each side which behave as inverted ribs, beyond the perimetral, which are the parapets the visitor observe.

It seems there was a definite choice toward the mass, a volume of solid and compact appearance in the roof. This solution opposed several other designs by the architect.[6] In his house, designed by himself, the light crosses the roof in many points. “The house has skylights everywhere”,[7] the architect stated. The roof, far from solid, opaque, or massive, presents itself as a light element, with slender apparent beams. Mendes da Rocha commented regarding those: “just to have an idea, the engineer Siguer Mitsutani finessed the calculations of the slab so much that it reached a thickness that was against regulations. And that’s how it was agreed. He proposed to disregard the security coefficient of the regulation and made an alternative calculation”.[8] The result of the roof of the Chapel of Saint Peter could be closer to the Saint Bonifacius Church, designed by Hans Broos in São Paulo if Mendes da Rocha had adopted the same solution as the roof slab of his own house. Thus, the perception would be, if not opposed, at least completely different. The floor of the Brazilian Pavilion in Osaka, according to his memorial was a “star floor”.[9] The light penetrated a FAUUSP-like roof, allowing the constellation to appear as if it was drawn on the floor. This roof is, once again, ribbed, open to the entrance of the light from the sky and, seen from the outside, even vaulted.[10]

But not all of Mendes da Rocha's projects allow a homogeneous reading from this point of view. In December 1986, the year before the Chapel project, Paulo Mendes da Rocha conceived the Brazilian Sculpture Museum (MuBE). It is possible to observe that the great MuBE marquee and the roof of the Chapel of Saint Peter are part of a group of similar projects that the architect carried out around these years.[11] Perhaps the origin may be in the house in Catanduva and her precursor, the Junqueira House, as Sophia Telles indicates:

“[The] Junqueira House is a kind of preview of the museum [MuBE]. It is only in the air. A big portico sustains a beam and over it a volume, laterally removed from the gables, slightly rotating and seeming to detach, so to speak, from the large structure. In frontal elevation, we see a blind gable, ambiguously deformed by the rotation angle, and we cannot decide if it is detached or contained in the portico. The clear, luminous color – again – applied over the concrete slab removes the opacity and leaves the design of the structure translucent. In the Catanduva House (which was not built), the main building finally detaches, coming to the ground. A buried middle ground, as a steep of the ground, the house prescinds structure. The big porch, transversal to the house, is completely free.

The museum would be, thus, a synthesis of this last path”.[12]

To this series of projects, we could add the project created for the contest for a public library in Rio de Janeiro (1984). The solution of a big porch over a building that is part “of the ground itself” is also present in the library, although with some differences. The porch of the library, for example, is not completely detached from the rest of the building, as Sophia Telles highlighted regarding Junqueira House. Regarding the structural solution of the roof, the library has a large visible beam that removes it from approaching the idea of archetypical antae, unlike MuBE. In the MuBE project, the roof also has beams, even if they are not visible from the visitor's point of view, who perceives the roof as a solid element. However, it is not solid, the beams are hidden in its interior and it is not possible to see them except covertly, in the openings made in the lower flap for lighting. In the roof of Campos do Jordão, not even covertly this is possible.

In Hagia Sophia we find once more the opposite solution. On one hand, it is possible to affirm that in the interior the structural elements are being dematerialized by vibrant and reflective surfaces. According to Christian Norberg-Schulz, “pillars and walls are not characterized as structurally different elements; like the whole interior, they are covered by a continuous covering of marble panels and mosaics”.[13]

On the other hand, in the dome, the main expression of the roof of Hagia Sophia, the ribs are exposed in the ceiling. Forty ribs function as beams, which contribute to diminish the deformations of the dome. In this case, they contribute along the surfaces to the sense of lightness in the roof, adding to the profusion of shadows and transparency. The ribs allow the surface of the dome to be perceived as a delicate shell that floats above the church. Therefore, the dome floats above the head of the visitor, standing ever so subtly on the edges of the ribs. In the poem of Paul the Silentiary, recited in early 563, soon after the second consecration of the church, “into the immeasurable air is a helmet rounded on all sides like a sphere and, radiant as the heavens, it bestrides the roof of the church”.[14] The shadowy and heavy concrete slab that covers the Chapel lies in the extreme opposite of the description by Paul the Silentiary.

3. *Christian topography*

In 2017 the MuBE held an exhibition called “Stone in the Sky: Art and Architecture by Paulo Mendes da Rocha”.[15] For this exhibition, the artist Carmela Gross conceived *Terra*. This work consists of blue LED stripes inscribed in a 4,38 by 16,80 meters rectangle on a metallic structure standing over MuBE marquee. The LED stripes formed the word “TERRA” [Earth]. However, this inscription could not be seen by the visitor of the museum. No one standing on the ground inside or outside the museum could see the inscription. As we pointed out before, the same happens to the inverted beams on the roof of the Chapel of Saint Peter. Only someone on the sky, detached from the ground – either above a building or floating in the air on an airplane – could read “TERRA” on MuBE; or see the beams in the Chapel. Carmela Gross’s reference to one of the most important episodes in the history of mankind seems evident. Just like the one who can read “TERRA” on MuBE’s marquee, the astronaut Yuri Gagarin was in the sky in 1961 when he supposedly said “The Earth is blue” at the moment when, for the first time in history, a human traveled to space. According to a Brazilian newspaper from the next day, the Russian newspaper Izvetia affirmed that only when he exited the spaceship Yuri Gagarin said “the sky is dark, very dark, and the Earth is of a very light blue […]”.[16] In the joyful version of Paulo Mendes da Rocha “we see on the television an astronaut sending a message to his mother: from up here, Earth is blue!”.[17] For our case it is of little relevance the exact words or when they were said. What matters is that for the first time the man left its planet, and it was possible to look at it from outside. For the first time the man disconnected significantly from the ground, and with that, our point of view was no longer only that which rises from the Earth's surface in ascension, towards the sky, and began to, from an elevated plane, look downward, towards the ground. Space travel made possible a radical inversion in the position of the man in face of the world, a world that they were always part of.

In the MuBE and the Chapel, a piece of earth seems to take flight artificially from the ground, causing a deformation below. The concrete, on other hand, is stone, a piece of ground that Mendes da Rocha artificially placed on the sky. The deactivated quarry facing the altar of the Chapel, on the other side of the valley, not very distant in level from the altar, seems to suggest an image of the inversion of Paulo Mendes da Rocha: stones ripped from the ground and placed on the sky artificially on this side of the valley. Carmela Gross labeled the big roof of the MuBE “TERRA”, the Portuguese word for earth and the Earth. Sophia Telles, on her account, said:

“In Paulo Mendes, the consciousness of this singular condition of the surface [sublimating the pillars and the idea of foundation, making the project land rather than root] which refuses the foundation forces a paradoxical unity between built object and terrain. The section is thought by inversion: the stability, where the construction is located, seems to move, as something unstable.”[18]

On other hand, still in the words of Sophia Telles about the MuBE, “the almost 1:1 proportion between the height of the beam and the ground-to-ceiling height (2x2,5 meters) produces, thus, a kind of comprehension of the eye towards the ground, which compels us to go down, little by little, until the interior […].[19] This description seems adequate to what happens in the Chapel of Saint Peter, where the proportion between the roof and the height between the access floor and the ceiling is even more adjusted to 1:1 proportion (2x2,20 meters), thus compelling us to descend with more energy. The impression of a great “stone in the sky” a few centimeters from our heads compress intensely our eye and our body.[20]

Thus, seems even harder to imagine a historian as Procopius of Cesarea would be convinced that the visitor would feel their heart elevated to God when entering the Chapel, as he was about Hagia Sophia.[21] Not only because of the characteristics of the roof, as we pointed before, but also because of its relation to the floor. The experience which Procopius of Cesarea described was probably conditioned by the spatial organization of the church as well. After crossing the large access atrium, the visitor reached the narthex and exo-narthex, both dark and with a small height to ceiling. As we enter the church, the height elevates, and space vertically expands towards the central dome. This ascension experience was accompanied by the use of materials and light: there is a clear difference between the lower part of the church – which is a darkened marbled chamber with few openings – and the higher part of the building, glitter of gold and with far more openings.

The initial spatial comprehension when accessing the building is similar for the visitor in the Chapel of Saint Peter, as seen before. But what is relevant here is not this fact, which alone lacks meaning. Regarding the expansion, it is also present (naturally on a smaller scale) in the experience of the visitor of the Chapel of Saint Peter, although, once more, reversed. If the expansion in Hagia Sophia is ascending, in the Chapel of Saint Peter is descending. In Hagia Sophia it is the roof that curves, while the ground stays horizontal, and in Chapel of Saint Peter, the opposite happens, the ground curves while the roof stays perfectly horizontal.

We should highlight that in the VI century, the early beginnings of Christianity, Procopius of Cesarea and Paul the Silentiary made their descriptions of Hagia Sophia, and it seems that it remained recurrent as part of a tradition in church buildings. The same seems to have occurred with the conceptions of

another of their contemporary, Cosmas Indicopleustes. In his book *Christian topography,* he illustrates his cosmic model. In one of the drawings named *The Universe*, it appears represented by a chest-like box, or vaulted building (Fig. 3). In the lower part, prismatic, we see the material world, and above, in the vault, the celestial world. The ground below, the sky above. This cosmic model was built monumentally in Hagia Sophia. Indicopleustes' representation matches the interior of several churches from different ages, whether they have domes, vaults, or any celestial reference. In opposition, if the Chapel of Saint Peter approaches this conception, it could be by inversion. The ground, the stone, is represented by the roof, and the curved element (in the Chapel's case, polygonal), is represented in the nave. In the aforementioned episode of Yuri Gagarin, his experience as the first human being to leave the world designed by Indicopleustes resulted that, for the first time, the celestial dome was under our feet, and not above our heads.

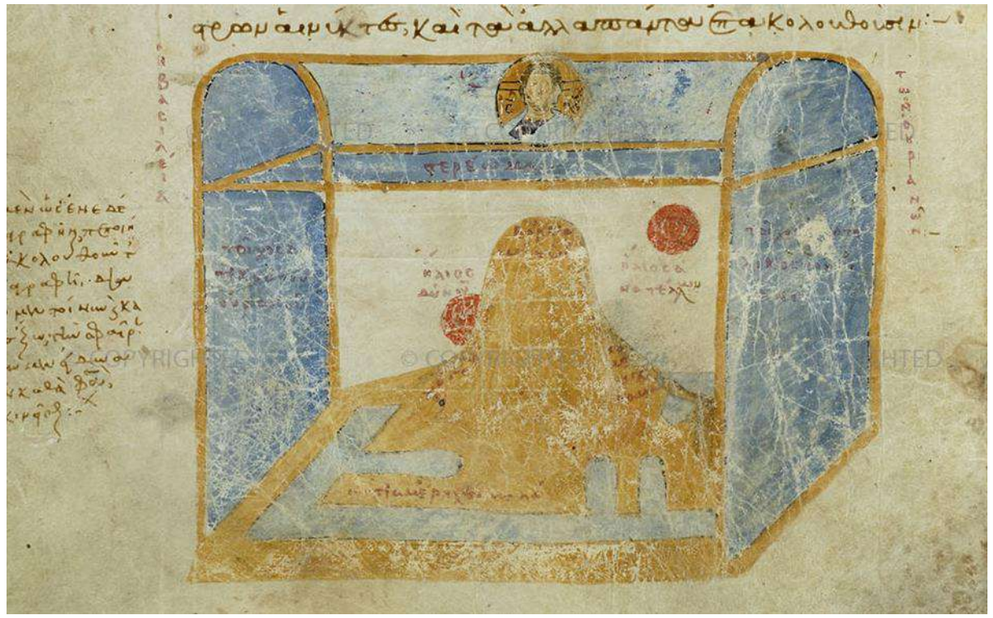


Fig. 3

Rather than rising, like Hagia Sophia, the Chapel of Saint Peter descends. The visitor that reaches the atrium of the Palace does not see the Chapel properly, as it falls over the horizontal plan of the esplanade. The body of the visitor entering the Chapel does not rise, it descends the ground over which they step before entering the building. At this point, the surface of the floor becomes curved, concave.

It seems that the Chapel, far from repeating traditional cosmic and theological conceptions as if they were immutable, subverts them. In this sense, the design of a hollow underneath the plane of the world where our body descends is more suitable to the representations of Botticelli's Dante's inferno. However, as we will see, the "problem" with associating the design of the Chapel to a representation of hell would also be "solved" by the architect.

4. Water

Bissera Pentcheva identified in her studies about multisensory aesthetics in Hagia Sophia the association between Greek terminology *marmaron* (marble), *marmarygma* (gleam, glitter) and *marmario* (to quiver, sparkle), and Marmara, which ranges from linguistic connections and onomatopeic of the Greek root *marmar-* until the ancient geology according to which following Aristotle's *Meteorologia*, "marble was thought to be composed of earth particles percolated in water and then solidified into stone by dry exhalations from the depths of the earth".[22] The wave pattern and luminosity of the marble floor of Hagia Sophia, composed of gray Proconnesian marble, "stimulated viewers to conjure up in their imaginations the image of the sea",[23] that is not merely optic but also acoustic, linked to coruscating water. The vibrant gleam of gold mosaics of the upper part reflects in the marble of the lower part, creating a particular effect on the viewer, giving it life and movement, and creating an interior of shifting appearances.[24]

In Campos do Jordão the ground not only alludes to the sea, but it is also water. The ground of the Chapel is fluid and dynamic, not only metaphorically. If there is a reference to the sky in the Chapel of

Saint Peter, it does not seem to lie on the roof plane or any other place calling to ascension. On the contrary, it seems to lie in the opposite plane to the roof, in the ground plane, in the water mirror which reflects the sky. Thus, the traditional celestial reference of the roof seems to be moved to the ground, as if it was mirrored.[25]

The ground in Hagia Sophia can be read as a reference to coruscating water, as Bissera Pentcheva pointed, but this reference to water cannot be interpreted the same way in the water floor of the Chapel of Saint Peter. In Istanbul the marble floor relates to the water of Marmara Sea, which belongs to the earth, and in Campos do Jordão the water relates to the sky, which penetrates the Chapel by the reflection from the ground.

Whoever is in the nave of the Chapel of Saint Peter can describe their experience in similar terms to those used by Yuri Gagarin from his *navis*[26]: "the sky is dark, very dark, and the Earth is of a very light blue […]".[27] The roof is static as the Earth and the water mirror dynamic as the clouds. Not long ago it was possible to see carps that, like angels, floated in the sky reflected in the Chapel floor.[28] As Procopius of Cesarea and Paul the Silentiary, Radha Abramo[29] also wrote about the just finished building: "[the] floor sometimes escapes the feet, gives the impression we are in a different level of reality".[30] As the chromist and the poet, the art historian and curator highlighted the transcendental experience that the visitor would have by entering the Chapel, and naturally the emphasis was on the floor, not the ceiling.

The solutions proposed by Paulo Mendes da Rocha for the earth-sky and floor-roof dichotomies in the Chapel seems to lead us to consider the possibility of understanding the nave as an inverted dome. Like a dome, the nave of the Chapel approaches its convex face to the sky, represented in the water mirror, and dilates the space in its concave face, by opposition to the horizontal place from which it departs, represented by the solid stone of the roof. If, according to Richard Krautheimer, "the light and the colors all emanate from the center dome"[31] in Hagia Sophia, in the Chapel of Saint Peter the light and colors emerge, by reflection, from the water mirror below[32]. The work of Glaucio Pinto de Moraes contributes to this effect. Painted in the lower part of the chorus and incorporated into the architecture as if it was a fresco, it is the only source of intense color in the interior of the Chapel, and can only be seen by one in the nave through the reflections on the water mirror.[33]

Thus, the Chapel seems to evocate an ambiguous experience of celestial descent. Hagia Sophia is, on its account, full of ambiguities, which has frequently been interpreted in dialectical terms, making its architectural design especially rich. According to Krautheimer, "statement and denial are the basis of Procopiu's description just as they are at the basis of the architecture's design".[34] Krautheimer, for example, points a quote where Procopius observes:

The building [...] forms part of the city, but at the same time, it stands very much by itself. It is exceedingly long, yet extraordinarily wide. It is bulky, yet harmonious. Light seems to flood the interior from the outside, yet it seems generated inside as well. The structure is solid, yet it engenders a feeling of insecurity. The columns perform in a choral dance, the piers are sheer mountain peaks. Vaults seem to float, the dome seems suspended from heaven. Vistas change and yet the spatial shapes follow each other in a clear sequence.[35]

In this series of ambiguities that coexist in Hagia Sophia, perhaps one of the most relevant is the conflation of basilical and centralized buildings. As Christian Norberg Schulz observes, "since the beginning, some spatial relationships profoundly symbolical were adopted as a starting point for the building of churches: the concepts of 'center' and 'paths'. On one hand, early Christian architecture searched for an answer to the necessities of the congregation of the ecclesiastic community and the liturgic rites in the Roman basilicas. On the other hand, the central plan building – initially preferred in the baptistery, mausoleum, or *martyrium* – was adequate to the symbolic demands. Examples of this initial alternative in the time of Constantin were the old St. Peter's Basilica and the mausoleum of Santa Constanza in Rome. The synthesis of these two paths would be recurrent in early Christian architecture. Examples of these attempts were the SS. Sergius and Bacchus at Constantinople or San Vitale at Ravenna. In both cases, the centralized space is covered by a dome as in Hagia Sophia. The longitudinal component emerges mainly from a juxtaposition of elements, as the narthex and the apse. In Hagia Sophia this ambiguity is even more emphatically conveyed. In Hagia Sophia the basilical interpretation of a more horizontal nature not opposes the central and more vertical interpretation but it complements it and potentializes. The body of the visitor is compelled to enter and walk the space towards the center, where the impulse of ascension towards the dome is produced.

From a completely different solution, the design by Paulo Mendes da Rocha for the Chapel of Saint Peter becomes indissociably central and basilical as in Hagia Sophia. In the croquis by Mendes da Rocha is visible the hard conflict between the central form and the basilical form probably faced in the conception process (Fig. 4). The steps of the benches in the nave sometimes tend to the idea of *martyrium,* sometimes to the idea of the basilica. The choir sometimes embraces the pillar, sometimes tangency it in a straight line. Sometimes the altar is perpendicular to the axis, sometimes it leans down

to the attraction of the mass of the pillar. Sometimes the path to the baptistery rotates around the pillar, sometimes it goes straight, or, as the final solution, a combination of both. Sometimes we see traces of compass, sometimes a straight line parallels to the longitudinal axis, drastically escaping the boundaries of the Chapel. The great tension between the expansion joint nave-wall (ever-present in the straight line along the retaining wall) and the column (always circular), seems to have generated a rich clash of possibilities which resulted in a highly complex form, that not only resumes the debate of early Christian architecture – that has been the reason for debate and conflict, as in the troubled conception process of Saint Peter Basilica in Rome – but it also takes it a step forward. In the final solution, the plan starts from a regular octagon that, as in San Vitale, gives the space desired centrality, reinforced in this case by the central pillar of colossal dimensions. However, the nave is half octagon, which attributes it to the longitudinal character, reinforced by the transversality of the retaining wall and the longitudinal character of the choir. Thus, the body of the visitor is compelled to enter and walk the space, as in Hagia Sophia, but the vertical impulse follows the opposite direction.

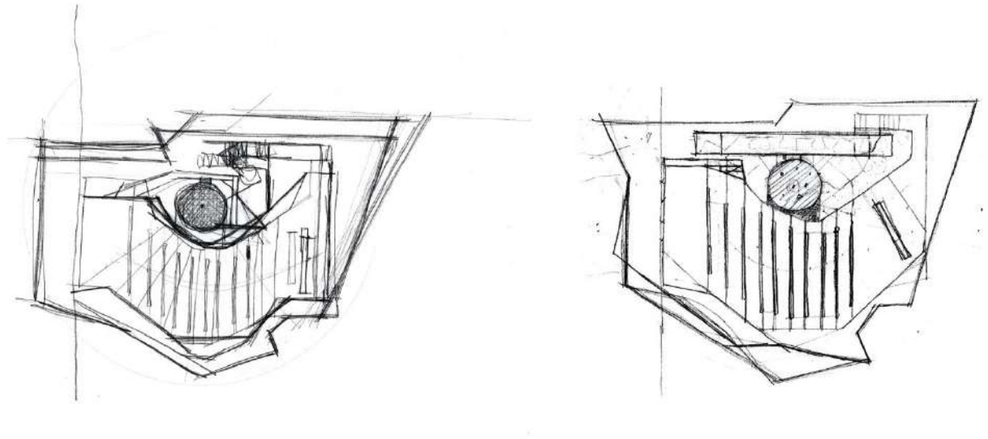


Fig. 4

Inverted, the Chapel of Saint Peter relates to the solution of Hagia Sophia, and many other churches around the world, from many ages. (Fig. 5) The elaborate forms of the Chapel of Saint Peter designed by Mendes da Rocha do not seem to arise in answer to arbitrary and irrational demands. These demands fall into a pattern, and the pattern, although subverted, is legible.

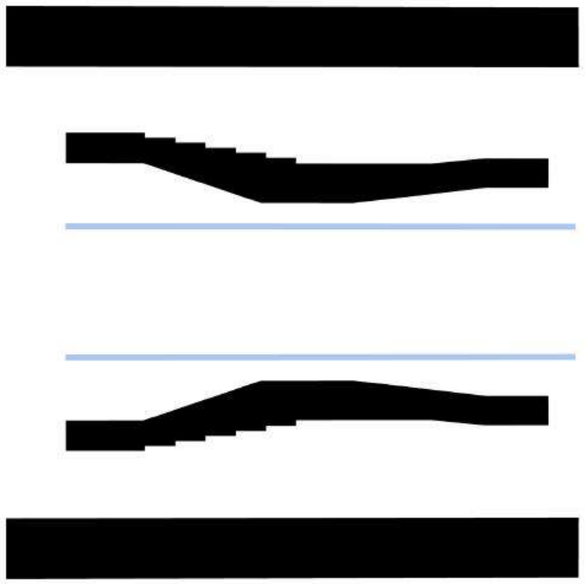


Fig. 5

Notes

*This research was supported by the Brazilian National Council for Scientific and Technological Development (CNPq, Conselho Nacional de Desenvolvimento Científico e Tecnológico).

1 Rykwert, Joseph. *Church Building*. Londres: Hawthorn Books, 1966. p. 7.

2 Zein, Ruth Verde. “Há que se ir às coisas: revendo as obras”. In Rocha Peixoto, Gustavo et al. *Leituras em Teoria da Arquitetura 3: Objetos*. Rio de Janeiro: Rio Books, 2011. p. 213. [Translated into English by the author]

3 In previous visits and photographic record, I had already noticed some changes of elements, such as a modification of Mendes da Rocha's elegant railings; the original steel frames, which are now made of aluminum and with different ceiling fixings than the ones originally designed; or the external water mirror that today is completely detached from the interior water mirror because of a wall that separates them, creating a barrier that also prevents the entry of the sun's reflections under the wall of the tunnel leading to the Palace.

5 According to Rykwert in Rykwert, Joseph. *Church Building*. Londres: Hawthorn Books, 1966. p. 49-50.

6 This is the case of the Clube Paulistano Ginasium, whose roof is close in solution to traditional church domes. The Chapel’s engineer, Siguer Mitsutani, made the calculations for other Mendes da Rocha’s buildings, such as the house for the architect himself in Butantã or the Brazilian Pavilion for Expo '70 in Osaka, where the structural solution of the roof is reversed in relation to the Chapel if we observe the arrangement of the beams.

7 Testimony by Paulo Mendes da Rocha about Casa Butantã in Piñón, Helio. Paulo Mendes da Rocha. Barcelona: Ediciones UPC, 2002. p. 28 [Translated into English by the author]

8 Piñón, Helio. *Paulo Mendes da Rocha*. Barcelona: Ediciones UPC, 2002. p. 29. [Translated into English by the author]

9 According to project specifications in the presentation board published in: Pisani, Daniele. *Paulo Mendes da Rocha: complete works*. São Paulo: Gustavo Gili, 2013. p. 179. [Translated into English by the author]

10 In this sense the solution is close to other buildings by Paulo Mendes da Rocha, such as the project for the Faculty of Philosophy and Sociology of São Paulo University (1961). The light entrance in the ceiling, absent in the Chapel of Saint Peter was, on the other hand, a fundamental characteristic of any kind of project by the architect, such as the Goiás Jockey Clube (1962), the Millan House (1970), the MAC-USP (1975) or the annex building of the National Coach Museum in Lisboa (2008).

11 The MuBE was a result of a design competition that Mendes da Rocha won. A surprising fact about this project is that the architect and his team had only ten days to develop the project, which became one of the most relevant in his career. According to statements from the architect and part of the Chapel’s design team [Statements of Paulo Mendes da Rocha, Alexandre Delijaicov e Eduardo Colonelli in an interview to the author held on January 23 and 24, 2018.] the Chapel was also conceived very quickly, which may indicate that the architect was working on principles previously consolidated on these projects that are close in date.

12 Telles, Sophia da Silva. 1990. “Museu da Escultura”. *AU - Arquitetura e Urbanismo*, no. 32: 48-49. [Translated into English by the author]

13 Norberg-Schulz, Christian. *Arquitectura Occidental*. Barcelona: Gustavo Gili, 2007. p. 71.

14 Silentiary, Paul. Description of Hagia Sophia. 563. English translation available in: http://projects.mcah.columbia.edu/medieval-architecture/htm/or/ma_or_gloss_essay_paul.htm

15 The exhibition reunited materials such as croquis, texts, models of Mendes da Rocha’s buildings and works of art, one of them the piece that inspired the name of the exhibition, La Flèche de Zénon, by René Magritte, in which a great stone, like the beam of MuBE, floats in the air.

16 *Jornal do Brasil*, April 13, 1961: 2. Available in: http://memoria.bn.br/DocReader/DocReader.aspx?bib=030015_08&PagFis=17098 [Translated into English by the author]

17 Excerpt from a lecture given by Paulo Mendes da Rocha. Available in: https://www.youtube.com/watch?v=AE9-AshxcQk [Translated into English by the author]

18 Telles, Sophia da Silva. 1990. “Museu da Escultura”. *AU - Arquitetura e Urbanismo*, 32: 47. [Translated into English by the author]

19 Telles, Sophia da Silva. 1990. “Museu da Escultura”. *AU - Arquitetura e Urbanismo*, 32: 46. [Translated into English by the author]

20 This experience is radicalized in the choir, where the roof slab keeps its level and the ground elevates, reaching a ground-to-ceiling height of only 1,90 meters.

21 See note 5.

22 According to Pentcheva in Pentcheva, Bissera V. 2011. "Hagia Sophia and Multisensory Aesthetics." *Gesta* 50, no. 2: 96

23 Pentcheva, Bissera V. 2011. "Hagia Sophia and Multisensory Aesthetics." *Gesta* 50, no. 2: 97

24 Pentcheva, Bissera V. 2011. "Hagia Sophia and Multisensory Aesthetics." *Gesta* 50, no. 2: 93-111

25 This mirroring was present in the original design of other elements of the Chapel. According to the testimony of the member of the project team Alexandre Delijaicov, the frames of the facade glass came to be thought of as "chestnuts" that would suspend the glass from the ceiling, thus resulting in the entire facade hanging from the roof. [Testimony by Alexandre Delijaicov in an interview with the author held on January 23, 2018.]

26 The Latin word for *ship* (in English) and *nave* (in Portuguese.

27 See note 15.

28 In a visit made in June 2015, there were carps in the water mirror inside the Chapel. In a visit made in November 2017, there were carps only in the exterior water mirror.

29 Radha Abramo was the curator of the Artistic-Cultural Collection of the Government Buildings of the State of São Paulo in the years while the Chapel was designed and she was a key figure to concede the commission to Paulo Mendes da Rocha, according to statements by Mendes da Rocha and Alexandre Delijaicov in interviews to the author held in 23 and 24 of January 2018.

30 Abramo, Radha et al. *Capela São Pedro Apóstolo*. [s.l.]: Editora Três Ltda, [n.d.]. p. 6.

31 Krautheimer, Richard. *Early Christian and Byzantine Architecture*. Baltimore: Harmondsworth, 1965. p. 160.

32 It is worth remembering, regarding this observation, one of the three chapels that the architect designed to date. In addition to the Chapel of Saint Peter and the most recent Chapel of Our Lady of the Conception (Recife, Brazil), he designed another chapel, which was not built, in Jardim Virgínia (Guarujá, Brazil), which Daniele Pisani hypothetically dated in 1955, a year after Mendes da Rocha graduated. Some of the main features of the Chapel of Boa Vista Palace can be seen in Jardim Virgínia Chapel. This is the case, for example, of the nave that seems to float in the eyes of the viewer. However, what mostly draws attention is the floor and ceiling solution. At first glance, it might seem that the solution of these two elements is not far from Hagia Sophia's solution: a horizontal floor on which, in contrast to it, rises a roof inclined towards the sky. The inversion, however, appears again in the choice of the location of the openings. Although, the roof does not allow light to enter [This was explained by the architect in an interview held on January 23, 2018, which can also be seen in the design drawings]. On the contrary, the floor, although being flat, receives sunlight reflected from the floor, and enters through openings located at the ends of the base of the triangle where the ceiling height is reduced and insufficient for the visitor [This was explained by the architect in an interview held on January 23, 2018]. The light does not descend from the sky through the roof, but rises from the floor to the floor, as seen in the plans and sketch made by the architect. It is necessary to highlight that the project is located on the edge of the sea, and the soil

of the place where the Chapel was to be built was sand, an unstable and non-static element that, similar to the water mirror of the Chapel of Saint Peter, reflects the sunlight.
33 Paulo Mendes da Rocha proposed to place a painting by Glauco Pinto de Moraes in that place [this was explained by the architect in an interview held on 23 January 2018]. The choice of the place for the painting was important. According to the architect's words, it was for the following reason: “The painting on the ceiling whose shape, due to history, is not very suitable, but the choir, which is a beam, is a confined space as if it were this table because the choir is a board for two rows of singers, attached to that column” [Testimony given in a lecture during the event" IX International Seminar ", at Escola da Cidade. Available at: https://www.youtube.com/watch?v=YzouvrpNwi4; Translated into English by the author]. However, we see that it would be difficult to think about the painting on the ceiling of the Chapel, not just (or not so much) because the shape of the ceiling is not suitable. A painting on the ceiling, like frescoes in traditional chapels and churches, would not allow the perception of a piece of soil inverted in the sky. The appearance of raw concrete is undoubtedly much more consistent with this idea. On the other hand, if the painting had been done on the ceiling, the nave would have largely prevented it from reflecting in the water mirror, which happens profusely at the bottom of the choir. The water mirror painted by the reflection, once again, acquires properties characteristic of a traditional church building ceiling.
34 Krautheimer, Richard. *Early Christian and Byzantine Architecture*. Baltimore: Harmondsworth, 1965. p. 158.
35 Krautheimer, Richard. *Early Christian and Byzantine Architecture*. Baltimore: Harmondsworth, 1965. p. 158.

Image Captions
Fig. 1. Grafton Architects and Eileen McDonagh, Stone Model of the Chapel of Saint Peter in Campos do Jordão. Source: Grafton Architects Archive.
Fig. 2. Paulo Mendes da Rocha, sketches (longitudinal sections) of the Chapel of Saint Peter in Campos do Jordão. Source: Paulo Mendes da Rocha Archive.
Fig. 3. Cosmas Indicopleustes, a fragment of a page from *Topographia Christiana* (facsimile). Source: Biblioteca Medicea Laurenziana.
Fig. 4. Paulo Mendes da Rocha, sketches (floor plans) of the Chapel of Saint Peter in Campos do Jordão. Source: Paulo Mendes da Rocha Archive.
Fig. 5. Diagrams (longitudinal section, and it mirrored) of the Chapel of Saint Peter in Campos do Jordão. Source: Author.

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The relation between common and ephemeral:
a critic analysis about the concepts

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Abstract

The work seeks to develop a critical analysis about the concepts of common and ephemeral, dealing with the relationship between ephemeral architecture and the formation of urban space through tactical actions, usually implemented by the creative class of the city, such as professionals of architecture and design, together with society. These actions provide urban voids with transformations between living spaces. The urban fabric provides new ways of coexistence of urban society, where ephemeral actions have been the focus on the planning and architectural spheres.

The changes in the urban scenario reflect the city as kinetic – in constant change and movement, highlighting the tactical urbanism. Endowed with a "local" logic, tactical urbanism responds to the needs of citizens linked to where they live, boosting concepts and trying to bring the transformation of space closer to ephemeral interventions. In the temporal dimension, the ephemeral takes on importance – about how we should use space to be able to follow and be transitions without clinging to just one solution.

Through an understanding of the concepts about ephemeral interventions, a critique is produced about its position in the current context so that themes such as the common and the right to the city in the sphere of space production and architectural language are addressed throughout the study. Thus, specific observations were made about the way of thinking about the potentiality of the ephemeral and transform the city in several scales. The work seeks to build a thought about the temporal changes that occur in cities, in the sense that the work develops a posture of the architectural relation to the common in its ephemeral practice.

Key words: Common, ephemeral, urban society, kinetic city, tactical urbanism.

1. Introduction

At the end of the 1960s, Lefebvre (2001) consolidated the term Right to the City in the context of the demonstrations and demands that took place in Paris, due to the physical transformations that were intended, among other episodes, to destroy traditional neighbourhoods for the implementation of buildings in height. The author's reading of the urban scenario in that decade proposes that the Right to the City is characterized as a rupture on the logic of urban transformations disseminated by capitalism. Later, in the expansion of this debate, authors such as Friedmann (1993) and Harvey (2012) took part, who stated that the city could only be called as city when its streets belonged to citizens, which would be demonstrated by control over current and future urbanization processes.

The great discussion derived from Lefebvre's studies focuses on the issue of equality of access to the city, as Brandlhuber, Grawert and Ngo (2019) point out, seen as a confrontation in the siege of the common lands linking them to capitalist exploration. Accompanied by the deprivation of common goods and events such as the financial crisis and an increase in neoliberalism since the 1970s.

Sassen (2016) characterizes cities as complex systems, and although incomplete, support the possibilities of making the urban, the political, the civic and the history. In the same way that cities are transformed, whether in different scales or processes, the urban undergoes changes, and is not just a static process. Thus, great challenges have been faced both by the main economic trends and by the processes caused by urban growth.

Current urban planning provides large-scale interventions, in top-down control, to impose themselves on urban actions, dominating these processes. As a result, cities build spaces without memories and proximity, causing the urban scenario to promote practical actions involving society in the planning process, with tactical urbanism having a significant role in the construction of the empowerment of individuals. Thus, the tactical emerges as a foundation for cities to carry out such transformations, where projects and temporary actions are taking centre stage in the current scenario, using the microscale of space to put collective interventions into practice (MACÊDO and ALMEIDA, 2018; BALEM, 2017).

The construction of actions on the temporal and ephemeral landscape seeks to present its architecture not only as a spectacle of the city, but even more as something that accompanies the changes that happen in the urban space. And, in view of a perspective in which continuous changes in scale and demographics occur, the problems of cities end up evolving at a pace much higher than the possible responses of urban planning, which result in a planning that finds little time to think about the future due to the present demands.

The observation of the power of transformations perpetuated by individuals in cities took Mehrotra and Benítez (2017, 2018) to conceive the theory of the kinetic city – designed to understand the events that resulted from transient landscapes and temporal spaces, also understood as ephemeral. What can be referred to the kinetic city, the authors express the idea that the development of cities makes urbanism often distance itself from the social context from which it should emerge. The kinetic city refers to the situation in which the role of urbanism as an element of transformation over the urban condition is discussed. Thus, the city presents a potential for changes and reconfigurations, allowing to understand the form of contemporary urbanism, as a tool for changing the roles of society and spaces over the urban.

The kinetic city cannot be associated only as a transforming element or as something improvised. Beyond that, it is a symbol of a temporal articulation of occupation of spaces, with the creation of a sensitivity rich in spatial reasons that includes what can be absorbed from the urban condition (MEHROTRA AND BENÍTEZ, 2018). It is endowed with a logic that finds its definition close to ephemeral urbanism, being a conceptual instrument that encompasses forms of urbanism that adapt to the local reality.

In this sense, the work aims to discuss the theme of tactical urban actions as an intermediate element between the positions defended mainly by Lefebvre (2001), through the right to the city, and Mehotra and Benítez (2017, 2018), with the theory of the kinetic city. The methodology adopted indicates the research as qualitative, with an exploratory character, because it allows intimacy with the problem, improving the concepts that make it more explicit (GIL, 2002). Documentary research was conducted based on scientific, historical and social articles focusing on the relations between time and space in the urban scenario.

Thus, the article involves the problem of recognizing the limits and potentials of tactical urbanism as a tool for reaffirming the right to the city, and in the midst of the scenario of the kinetic city, raising

questions about how democratic and collective participation in urban spaces can influence the process of urban planning and construction of the common.

2. The common between the kinetic city and the tactical actions

Montaner and Muxí (2014, p. 211) summarize what expresses the condition of the urban planning crisis in cities in a context in which their production – from the urban – needs to be revised, because the "technocratic urban practice is discredited, and its public dimension was marked by the predominance of real estate speculation, where the objective of the common good was contaminated by the demands of mercantilism".

It is from this same concern that Lefebvre (2001) turned to the consequences of accelerated urban growth and his concern with the rationality disseminated by cities, when he portrayed that urban development was marked by a massive immigration from rural to urban areas, and by a change in spatial structures, where functionalist urban planning led to a restructuring of degraded urban areas.
Social production has driven this discourse since 1960, with the economic crisis at the end of the decade, leading to the reconfiguration of capitalist production. Over the following years, Schmid (2017) points out the beginning of social movements, starting mainly from young people, against the low quality of urban life and demanding the fulfillment of the promise on which the right to the city is supported. Cities offer the promise of freedom, opportunities for encounter, urban culture and appropriation of public space.

These fights motivated society to create alternative spaces of cultural interest and centers of illegal occupation, resistance to large-scale projects and struggles against the various forms of gentrification. Thus, the years 1970 and 1980 were marked by social struggles for public space and observed in several countries, such as East Germany, Holland, Switzerland, Canada, United States, France and East Asia.

The current conditions of cities begin to create a space with which new structures seek a type of involvement on a new trajectory, offering spaces that can generate difference, through actors directly involved with the production of space, generating a series of objective conditions regardless of whether those involved want it or not (SASSEN, 2016). Consequently, Gadanho (2016) describes that neoliberal urbanization causes an emergency in informal cities, where professional and specialist organizations return to discuss an increasingly worrying urban condition.

Montaner and Muxí (2014) point to the current moment as an hour of seeking new protagonists who think and design cities, being the mode of segregating domination encompassed by diverse points of view that can reinvent cities. In this sense, not only do the developed interventions of society in space occupy a place, but the notion of the common also takes the dimension of a social production, through movements and collectives that have taken the urban spaces of cities in the search for the construction of something new, which have as their core the issue of governmentality (ALVES, 2019).

Dardot and Laval (2017), mention about the movement to defend these elements as common goods becomes a response to the obvious aspects of neoliberalism, the "plunder" carried out by governments on what was then in the public domain.

Mehrotra and Benítez (2017) confirm the issue of capital domination, perceived by contemplating the landscape of cities, in which current urbanism seems to be suspended on the accumulation of capital and what exists in cities in constant flux, having physical transformations that displace the structure of ideas and the relationship with development. To these cities in constant transformation, a new understanding of the role of individuals on public spaces is perceived, resulting in an articulation on the temporary occupation of space, conceiving a better sensitivity in relation to thinking about it, which includes uses never thought of in urban conditions of high density.

It is about this new political culture that makes it possible to understand that wealth is not only generated by the owners of capital, but also by communities or societies whose members place the common on the knowledge and competences of society. Thus, arises a new way of constructing a shared vocabulary that seeks to designate what belongs to the collective and must be managed responsibly (DARDOT and LAVAL, 2017).

Montaner and Muxí (2014) defend the need for urban planning that seeks plural alternatives, with attractions that may include sustainability and strategies to enrich the environmental territory. Centered on the conception that the economic interests proposed by the model of liberal neoconservativeism seek to replace not only the natural surroundings, but historical centers, streets

and public places that lose their role even imposed by the Athens Charter, work, housing, circulation and entertainment end up being left aside by the economic interests of the neoliberal model.

Nogueira and Portinari (2016) argue that the new urbanism practices assume an ephemeral or permanent nature but are mainly intended to inform the planning and urban problems encountered in cities in the long term. Thus, tactical urbanism comes into question in the current scenario to propose short-term actions and long-term changes, as a way of responding to the problems caused by neoliberalism and the capitalist production of space, without drastically altering the urban scenario of cities.

The intentions behind these projects sometimes aim at increasing economic revitalization, while others aim to improve pedestrian safety and provide opportunities for citizens to connect with each other. The way in which tactical projects are manifest is variable, given the different physical and temporal scales, although the vast majority are designed to be temporary – and therefore ephemeral – in nature, when later implemented on a local scale, in streets, buildings or blocks (PFEIFER, 2014).

Lefebvre (2006) points out that the city is a concrete and practical experience, a space for its inhabitants to use it and appropriate it in their daily practices, but that the experiences inscribed in space are collectively. In this context, Gadanho (2016) conceptualizes that tactical urbanism emerges as a form of reaction and response to the practices imposed by neoliberalism, being a tool for people to control urban issues with their own hands.

It is when contemplating the contemporary landscape of cities that one can perceive a deficiency over the urban, from which one can derive from the notion within the kinetic city. Unlike urbanity, which considers the city as a constant flow, the kinetic city takes care of the physical transformations that take off the very structure of cities, about a multifaceted change, conglomerating development in the progressive dimension, perceived as being in movement (MEHROTRA and BENÍTEZ, 2017).

Thus, the kinetic city moves according to temporality, being "a place where the design of functional solutions is more important than the construction of the architectural element, whose space prevails in the face of rigidity, flexibility is valued over rigor" (MEHROTRA and BENÍTEZ, 2017, p.85). It can be interpreted that the kinetic city reveals a view on the confusing lines of contemporary urbanism, being taken by the ephemeral and temporal, in the way that the transformations in the urban environment can indicate solutions not seen when it focuses on effective urban planning.

The kinetic city proposes, on the heading of ephemeral urbanism, a better understanding of the spatial and temporal dimensions of contemporary urbanism, and the importance of the role of people in sharing and shaping spaces in urban society (MEHROTRA AND BENÍTEZ, 2018). The discussion around the sphere of the kinetic city and tactical urbanism suggests that the exploration of the temporal landscape is linked to the use of public space, or abandoned spaces, as a tool for the construction of social approximation, perspectives of change on planning and popular participation in the construction of the city.

Moreover, the collective construction of spaces shows us the potential for change over the future of cities, depending less on major infrastructure works and more on the ability to imagine the most malleable environment in technological, social, materials about more economical urban spaces (MEHROTRA AND BENÍTEZ, 2018). These strategies are effective about the change of potential on the essential elements of the construction of the urban environment, where this change is what the kinetic city refers to, managing the layers of urbanism and accommodating the new needs of society.

In this sense, Pfeifer (2014) identifies the inefficiency of bureaucracy as a reason why citizens may be taking improvements into their own hands. Increased awareness of traditional planning processes may not be adaptable and resilient in response to local needs. Thus, tactical urbanism is a criticism of the status quo of government actions, specifically, it leads to an idea that citizens may have more to say and control the production of space (ALISDAIRI, 2014).

Thus, the construction of a long-term planning is caused by these actions on a small scale, together stimulating urban policies. According to Brenner (2016, p.9),"tactical urbanism is gradually mobilized through organizational, cultural and ideologically diverse interventions to address emerging urban issues." However, the sources that generate these interventions must be outside any ideology or institution. So, immediate or "acupuncture" modes of intervention in relation to these urgent local issues.

The temporary nature of tactical projects can also provide an opportunity for planners and citizens to collaborate with local projects. Both can watch an intervention on the ground and adjust before committing themselves in the long term. When successful, temporary pilot projects that gain local support may become permanent over time.

In the sphere of treating tactical actions as interventions on the common good, Dardot and Laval (2017) bring that this primacy that the recognition of these common spaces is what enables the articulation and transformation of space into a daily codecision scale. The goal is that these "commons" in the social sphere is not an obstacle to the exercise of this same government in the public sphere. The "tactical" or "kinetic" flexibility generates spaces where the occupation schemes determine a form of perception about the urban landscape, "the result increases the value of the open space, providing the means to improve social connectivity, which, in turn, provides greater interactions and also the possibility of collaboration" (MEHROTRA and BENÍTEZ, 2017, p.85).

Even if on a small scale, the ways in place to solve urban problems show that it is still able to bring together cities and society to build fairer and more sustainable cities, considering the principles of the right to the city through people's participation and social transformation. The transitions of landscape and urban spaces take place at different scales. Starting with a street, the changes built by people's action reflect the potential that society has over the environment in which they live, stating that popular participation can involve a set of meanings and results that incorporate urban planning and management over the city. At this point, the right to the city re-emerges as the structural concept that guides the junction of society and space over urban transformations.

3. The reaffirmation of the right to the city through the ephemeral interventions

The proposal of the right to the city defended by Lefebvre (2001) is presented through a critique of urban problems, where the mode of production of cities needs to open possibilities of horizons and paths on the democratic construction of urban spaces, in which "all perceptible (legible) urban reality disappeared: streets, squares monuments, spaces for meetings." (LEFEBVRE, 2001, p. 27). Faced with this reality, the author proposed that a new perspective on the Right to the City is based on the rescue of public spaces, strengthening its relations of encounter, social and cultural exchanges that represent the collectivity and individuality, composing itself on diversity and democracy, perceiving the public spaces that are successful as an example about the problems caused by the problem of urbanization (SANTOS; DIAS; ARRUDA, 2020).

For Albuquerque and Dias (2019) the debate on public spaces brings reflection on the challenges of the realization of the right to the city, in which the consequences of urban planning without participation of society weaken the spaces, removing them from the perspective of social construction on the city. Thus, urban policies on spaces have always been determined gradually, excluding democratic participation and their needs or solutions to the problems surrounding cities (CAMERA E MACIEL, 2019). It is possible to perceive this lack of action of people on the planning process in places of the city that end up being abandoned or suppressed by large urban infrastructure works, or in places excluded from planning, which present conflicting situations or even abandoned places.

Just as Lefebvre (2001) argues that the transformations of cities began to no longer be perceived with their traditional elements, such as art, science and philosophy, urban spaces began to represent the accumulation of capital in which their sense as a decision of people and social groups was lost in that time. The importance of realizing that the temporality and changes that the city carries are conceived in the right to the city and in the kinetic city, where the right defended by the author is above individual interests, focuses on collective rights over the space and way of life of society.

The resurgence of the discussion about the right to the city, as Harvey (2014) presupposes, through the social movements that generally emerge from the streets and neighborhoods, emphasize the existence of an "insurgent citizenship", through struggles that continue to exist about who should configure the characteristics of everyday urban life, which in turn are disassociated from the ideals adopted by Lefebvre. Thus, this right to space resurfaces, not out of loyalty of their ideals, but by urbanism through the streets and neighborhoods of sick cities, making the struggle of classes for their rights in full activity, for the cry of help and support of citizens oppressed by the transformation of space.

The appeal for this right is currently located in the movements of resistance, occupation and transformation of public spaces, where many of the problems identified by Lefebvre in the sixties were relegated to a background. However, Schmid (2017) points out that even under the new conditions established by the urban planning crisis, the right to the city must include more than the simple right to

exist and meet basic needs. In this way, the urban becomes a constant reinvention, and can arise in several ways, giving the opportunity to imagine alternatives and create possible worlds.

Alisdairi (2014) considers that tactical practices, in the context of the thought of the right to the city of Lefebvre, be an advance towards a city close to that of the author's conception. The parallel between the concept of the right to the city and tactical urbanism, that Lefebvre (2001) argues that space is produced by conception, perception and experiences, where ideas about conception come from the authorities, but spaces are always subject to appropriation. The right to the city allows people to participate in the use and production of urban space, as well as control over the production of space means control over social and spatial relations.

For Purcell (2014), the meaning of the context about the collective decision points to alternatives about the city, aligning with what Lefebvre called for a new city, in which he reabsorbed the state within society. The ideas of tactical urbanism resonate well with the right to the city, because the tactical process is an alternative on the government, taking people to the center of decision-making, rather than simply being part of the participation process, going against what Lefebvre calls active and real participation in the city.

The concept of self-management raised by Lefebvre (2001) appears in the practice of tactical urbanism. The connection with the right to the city provides people with alternatives beyond the status quo of urban planning. The processes of participation in the urban space reinforce society's knowledge about where they live, in which "no urban intervention can begin without the residents intervening in the diagnosis, and every work requires the opinion and activity of users in order to value and qualify their maintenance, in order to interpret their post-occupation." (MONTANER and MUXÍ, 2014, p. 219)

Tactical urbanism can be repeated in different places, becoming a global space. The dispute over the spaces of cities, while generating several problems, also diversifies the space, being the global city that provides the dominant corporate culture, mixed with different cultures and identities (SASSEN, 2016). The results obtained through tactical actions generate long-term changes, and can be evaluated in real time, transforming the city into an experimental laboratory. If included in the urban planning process, it provides trust among citizens, through participation in the improvements of the city (LYDON, BARTMAN, GARCIA et. al., 2012).

Lydon, Bartman, Garcia et. al. (2012) complement that when experiments are done flexibly and cheap, they can be more functional than if large investments were made. Tactical urbanism shows that preventive actions can be carried out before major interventions, and the lessons provided with the actions produced can be used as a first step in the realization of practices and together with long-term planning.

The right to the city, being considered as a right to promote society over the management of cities allows the change of the urban reality in which cities are located, through the construction of fair and democratic urban spaces, in order to preserve collective participation and the search for low-cost solutions that are the starting point of change, or effective on the urban problems encountered in the reality with which each citizen lives.

Therefore, the contribution of tactical urbanism on the city provides popular participation in the planning process, identifying the difficulties of urban spaces and being a diagnostic tool for those who plan the city. The growing sense of responsibility among citizens, given their contribution to communities, together with recognizing the value of citizens on participation in official planning processes, provides an opportunity for planners to find more meaningful ways to empower people to work together so that larger problems can be solved.

These tactical actions, or often ephemeral actions on the city, become a lesson that there are other ways of thinking about the common and acting on it. In addition to empowering the collectivities, these experiments can acquire permanent characteristics, modifying the spaces and making the kinetic city, which transforms through time, perceive.

4. Conclusions

It is understood the questioning about the permission for the occupation of the city and expulsion of certain individuals in relation to it on the new forms of urbanism. These, in turn, do not arise only as a comprehensive factor of the needs of current society as the urban space, as well as agents that promote the union between space and society, given the importance of the actions of tactical urbanism initiated by society.

The great project imagined by Lefebvre, in his right to the city, consists in exploring possible paths to an urban world where unity opposes difference, in which the meeting, the encounter and the interaction replace the struggle of the individual urban elements, thus being possible to form an urban space consisting of a social basis for a transformation of everyday life open to multiple possibilities of a radically different world (SCHMID, 2017).

At this point, the current problem of the right to the city, only for the political and economic elites who shape the spaces according to their pertinences, is pointed out by Harvey (2012) the taking of the operational form and political ideal, focusing on the question of who commands the necessary connection between the use of the excluding product and urbanization. Thus, the right to the city, before a revolutionary perspective, can be aided with tactical actions, supporting the perception of urban needs, and bringing practical and accessible solutions, through the promotion and organization of intervention movements in cities, which gradually compose a collective intelligence.

Harvey (2014) proposes that the right to the city lies beyond an individual or group right of access to the city's resources, but as a right to change and reinvent the city according to the wishes of the inhabitants. Therefore, it can be said that this new form of an urban process focuses much more on the collective than on the individual, considering that reinventing the city depends on the exercise of a collective power over the urbanization process.

Although the processes of participation are not new in democratic societies, Montaner and Muxí (2014) highight that they are one of the most important indicators in the sense that, in the internal spaces of cities, there is an effort to promote sustainability, thus demonstrating a more humane reality and more attentive to diversity and memory, which aims to achieve common benefits , and expresses the will of individuals to be part of the city, recognizing its transformations. And they continue:

> If equality and diversity are values, participation is a procedure, an instrument. However, its argumentation and protagonism are the key to the transformation of an urbanism open to social demands and whose objective is the values of equality and diversity (MONTANER E MUXÍ, 2004, p. 218).

At this point, it can be considered that tactical urbanism is a way of promoting the right to the city in the contemporary era, so that the claim on this right becomes a path to more democratic and inclusive urban environments, where social participation, as mentioned above, plays a fundamental role in this approach. Strategies such as this, have the potential to be essential elements in the construction of the contemporary urban landscape, so that it addresses the emerging needs of broad sectors of society (MEHROTRA and BENÍTEZ, 2017).

Planning and designing over time and considering what time itself can mean about transitions and transformations, thinking about the urban in these same terms, creates a different direction for what one eventually desires. Thus, time should be perceived as a rigorous path along with the discourse of urban planning, in which it cannot be only product or oriented object, because architecture is seen as a static process, but planning in relation to the kinetic city, about considering the temporal landscape, dynamic, cultural, can help to perceive a transition in temporal and ephemeral scale. The urban then, must be thought through architecture.

The dynamics created by these new types of "urbanisms", considering the ephemeral as tactical, represents a role of union that goes far beyond planning. Thinking about the city as a promoter of change leads to the materialization of the idea that the role of everyone over the city can go much further than effective participation in the construction of the common: it brings values, perspectives and knowledge about the power of the community.

The romantic idea that the construction of space has a strong power of transformation is based on the principles of the right to the city, discussed by some authors, demonstrated here, who cherish the common power over the transitions of the city. Gatta (2013) contributes to the collective idealization when he describes that the city is in a process of mutation in which it causes a lapse of suspension announcing a new future, but not yet completely defined.

Tactical urbanism thus emerges to a paradigm not only aesthetic, but cultural action, which is an ethics of intervention in the territory. Confirming the pertinence of this perspective, any work on the urban landscape, starting with the look and culminating in physical action, requires the intersection of dialogues in the various disciplines, then fundamentally the notion of nature and culture addressed.

In practice, today we find ourselves at the forefront of works and days in which there is no ideological monomania, but rather a simultaneity of interests, which, so to speak, give themselves an integrated perspective, thus causing the preservation of multiple dynamics between artistic activities and spheres that, by tradition, belong exclusively to the instrumental weave of social life. Finally, we need to know how to use the static city, how to use the ephemeral, in order to leave space for life and temporality also occupy the question of planning.

Notes
This work was supported by the following institutions: Fundação de Amparo à pesquisa do Estado da Bahia (FAPESB) and Fundação de Amparo à Pesquisa do Estado de Santa Catarina (FAPESC)

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Biography
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Social barrier regarding energy:
critical analysis from a dual perspective

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Abstract

We live in an age marked by an exploding world population and an ever-dwindling supply of resources (SOBEK, 2019). When it is outside from the epistemic context, it shows duality. On one side, with a large number of publications and multimedia exhibitions, the terms go on to designate an idea known to the general public, a specific jargon (SCHMID, 2005) - as renewable energy. On the other side, it results in a strong cultural barrier (CAAMAÑO-MARTÍN and NEILA, 2013) for society to spread new habits. For understanding this social barrier regarding energy, this article's goal, the methodological approach of taking things in pairs was used to create new relations between things. Hence the elected process results in the overlap between two images. Fig. 1, the narrative painting scene *An experiment on a bird in the air pump* (Joseph Wright 'of Derby', 1768) and fig. 2, the photojournalism *A looted Pepsi warehouse in Maracaibo, where the power was out for several days* (MERIDITH KOHUT, 2019), are the material for "dual-confrontation". They were chosen from a specific protocol: two figures within the timeline between the 18th century and today, in an energy scarcity context, where the narrative takes place within an architectural space, and with the user as the central character. Through these social crystallized scenes: how much of 'the infinite universe of science' (1) is in 'user awareness through the scarcity scenario' (2)? It is precisely from the overlap between the statement of the reason (1) and the discovery of unconscious desire (2), that the essay draws its strength. The results make clear the complexity of social, economic, and political relations triggered by the lack of energy, as an instrument of human equity. Also, the alienation of such forces by architecture.

Keywords: energy, social barriers, architecture integration.

Introduction
We live in an era marked by an expanding world population and an ever-diminishing supply of resources (SOBEK, 2019). When outside the epistemic context, it is a statement that shows duality. On the one hand, with a large number of multimedia publications, the idea is known to the public as a specific jargon (SCHMID, 2005) - like renewable energy, organic agriculture, or sustainability. On the other, it results in a cultural barrier for society to spread new habits into daily life (CAAMAÑO-MARTÍN and NEILA, 2013). Therefore, if such resources enable human life in contemporaneity, why do not we take responsibility for its production and consumption, rather avoiding it? Narrowing down the focus on energy, the article targets, the question above is a tool to conduct the thought.

Moreover, social disapproval "can act as a restrictive factor in achieving the ambitious governmental objectives regarding renewable energy production" (SCOGNAMIGLIO, 2016). This stance blocks the establishment of innovative technological means regarding a more secure energy matrix. Initiatives such as the *European Directive 2009/28/EC*, the *European Building Performance Directive - EBPD*, and the measures stipulated by Governor Andrew M. Cuomo for the state of New York about transferring 70% of its electricity to renewable energy sources until 2030, could be impaired because of social aspects.

Although such proposals boost the energy market, the abrupt and unilateral decisions added to the transition speed from traditional models to new technological means results in resistance. This deleterious effect due to the lack of a mediator - architecture, for example - emerges from the ability in transforming landscapes. Unlike fossil fuels, photovoltaic systems for example are "close to where people live" (SCOGNAMIGLIO, 2016) and introject values in this new relationship with a high degree of autonomy and the installation possible in the most varied locations. It demands tacit agreements different from what we have seen so far and neglecting this social characteristic is, in a way, undermining its prolific outreach (SANTOS, 2013).

In this sense, the results often appear as cases such as described in the New York Times article *He Set Up a Big Solar Farm. His Neighbors Hated It* (NIR, 2020). After Timothy Masters leased his land in rural Lewiston, USA, for a solar energy company to install photovoltaic modules he became the target of a growing reaction against the expansion of solar farms in rural areas (NIR, 2020). According to Masters, who is among landowners trying to profit from the New York state drive towards renewable energy, today the solar company pays 20 times more than the soybean producer who previously leased its land. There is also economic opposition from small farmers who "fear that they will be squeezed by energy companies willing to pay more for the use of agricultural land for their solar cells" (NIR, 2020). Other opposing reasons cited are the impact on pastoral views, the danger of glare for drivers, the concern with owls threatened by the difficulty in finding field rats to eat among the photovoltaic modules, in addition to the devaluation of houses on land neighboring the solar plants: "this house, what I want to leave for my son, is going to be worth nothing" (NIR, 2020).

Nevertheless, the opposite is also true but still incipient (OSSEWEIJER et al.,2018). The project *Agrinergies* is an example: a well-succeeded integration among energy production, fertile land use, and architecture established in Saint-Pierre, La Réunion, France by the company Akuo. It is the union among solar energy, lemongrass farming, greenhouses with photovoltaic roofs, and monocrystalline modules arranged in the landscape as waves along the route - angles in a range from 10°. Hence, it creates an inviting topography avoiding artificiality. It was legally approved for construction in the French Island because of such an approach, in a place where photovoltaic systems are not allowed due to laws of land and landscape preservation (SCOGNAMIGLIO, 2016). For this achievement, it is necessary to increase the performance and awareness of architects for the scenario (SANTOS, 2013), which still links photovoltaic technology with architecture depreciation (CERÓN, CAAMAÑO-MARTÍN, and NEILA, 2013; SCOGNAMIGLIO, 2016).

Finally, even if the scarcity of the world is undoubted by a wide range of authors (SOBEK, 2019; COLLETTI et al., 2018; SCHLUETER et al., 2016), it is a challenge for society to incorporate such forces into life. In this context, I aim to investigate this last concept: the social barrier regarding energy. Mainly to contribute to the discussion and also bringing it into the architecture field, as an important interface between men and energy (COLLETTI et al., 2018). From this background, there is no desire to exhaust the topic but to use the scientific device of "duality", which will be further explained, as an opportunity for exploration. Also, considering the social sphere as an ambivalent force, which oscillates meaning depending on history, context, social and ethical values, there are no static definitions.

Methodological approach

The *Criticall - International Conference on Architecture Design and Criticism*, whose *dual-ectics* theme encourages researchers to develop investigations through a dual perspective, builds the basis for the methodological approach. Duality not as a dichotomy but as a way to create new relations between things, which both rely on each other to make full meaning of one another. In this way, I also substantiate this choice based on Louis Kahn's studies (2010) about duality. The exterior and interior, the transition from public to semi-public and private areas, noise and silence, turmoil and tranquility, are relations expressed by theoretical and pictorial means in the book *Form and Design* (2010). From this approach, I will focus on the duality between light and dark. It is described by Kahn as spaces that “even though its pretension to be dark, it should have enough light from some mysterious opening to tell us how dark it is” (KAHN, 2010). Otherwise, the darkness would be just blindness. Superimposing this thought on the relationship of men and energy, in which architecture acts as an interface, I aim to discuss from times of energy scarcity what it could mean for men. Hence, energy as a resource for human life, like in Kahn's concepts of light and dark, will be understood from the confrontation of the lack of it.

Consequently, I established my comparative method: two images overlapped to construct the understanding. Such comparison will not be linear, that is, will not respect chronological information according to time - this happened after this in history. So each fragment will be side by side, creating meaning from the confrontation of parts taken from two figures within the timeline between the 18th century, on the verge of electric power control, and today. This historical distance between figures enables a broader perspective regarding social behavior about energy. Besides, the protocol for choosing them also covers the energy scarcity context, a narrative that takes place within an architectural space, and with the user as the central character.

The results were fig.1 *An experiment on a bird in the air pump* (Joseph Wright 'of Derby', 1768) and fig.2 *A looted Pepsi warehouse in Maracaibo, where the power was out for several days*(MERIDITH KOHUT, 2019). The first is an oil painting from the Enlightenment and Industrial Revolution context. The second figure, exposed in The New York Times article *Venezuela Was Crumbling. A Blackout Tipped Parts of It Into Anarchy* (CASEY, 2019), is a photography of the longest blackout in history that happened in Venezuela during 2019.



Fig. 1



Fig. 2

Duality

Context: It was night and the group was being illuminated by a single candle. The fascination by light is a usual subject in Wright’s depictions also as an allusion to scientific knowledge, the Enlightenment and Industrial Revolution context, like in *A Philosopher Lecturing on the Orrery* (1766), *The Alchemist Discovering Phosphorus* (1771), *The Blacksmith's Shop* (1771), and *The Iron Forge* (1772). Thus, *An experiment on a bird in the air pump* (1768) is not from literature or religion, and too modern to be a historical depiction. Instead, it captures the drama of a staged scientific experiment and the limits of human knowledge that proclaims the glory of man and shows what is possible to accomplish. “With one hand raised, the lecturer has the god-like power over life or death – he can either expel the air completely and kill the bird or allow the air back in and revive it” (THE NATIONAL GALLERY, n.d.).

But why does Wright not show us an electricity experiment - a topic more in vogue in the 18th century - instead of an air pump? Considering the air pump experiment developed by Robert Boyle occurred a century before, what was new in the painting was showing its impacts on ordinary people. Also, the painting background is lit by the moon again as an allusion to the Enlightenment and the Lunar Society, celebrating this new appetite for learning (THE NATIONAL GALLERY, n.d.). It was before the days of specialism, institutions, and universities, so people with common interests gathered in a club, discussing the potential of science in evening meals (UGLOW, 2011). The group situated in Derbyshire, a provincial town in England that boasted one of the first modern factories in the world: a water-powered silk mill called *Lombe,* is somehow influenced by such innovation. In the Derbyshire context, the painting exposes it also as a symbol of shared knowledge and Wright invites us to participate in the group as a public sphere (HABERMAS, 1962), spreading ideas about science and the world around us - since he left a space to seat.

Moreover, the air pump also shows the attempt to systematize the scientific experiment, in this specific case about the breathing and circulation process. Boyle wanted this experiment to understand what is the importance of air for animals. Consequently, he tested 12 species and put them inside the air pump to see the reaction when air ceased. The vacuum created by the pump, directly related to the machine’s advances produced by the physicist Otto von Guericke, was a way of measuring the animal behavior from the inexistence of air. Boyle saw that, like fire, all of them died. Nevertheless, in the painting narrative the man depicted by Wright was not a member of the Royal Society, but a “scientific showman”. Thus, the idea was to capture the spectator’s reactions, rather than discussing the experiment itself. This could also be understood as an antithesis between a more rational or sentimental stance about what is going to happen with this rare bird, where the magician's hand prompts for the observer the question: what do you think of that?

In fig. 2 *A looted Pepsi warehouse in Maracaibo, where the power was out for several days* (MERIDITH KOHUT, 2019), the figure captures the longest blackout in Venezuela’s history - at the end of July 2019, the country suffered from four blackouts in five months. The lack of energy

deepened the Venezuelan context, already in crisis, and thirty million people suffered from power loss for almost a week making the country's troubled political and economic situation even worse. The recurrence and scale of blackouts directly involved the provision of food, water, health system, and culminated in looting and violence. There were shootings between looters and business owners, while people tried to break into stores. “They were going to hospitals, at that time, which had no electricity.

So how are you going to care for people with gunshot wounds when there is no electricity?” (CASEY, 2019), in hospitals that barely had soap because of the shortages. In this context, the article *Venezuela Was Crumbling. A Blackout Tipped Parts of It Into Anarchy* is a description of Venezuela blackout in the second biggest city: Maracaibo, where fig. 2 shows a Pepsi warehouse looted.

From the overlapping images, fig.1 understands energy as an idea and future aspiration. It is a metaphor comparing also the possible implications of science: where the advent of science represents an epistemological cut with the ancient world, it is distinguished from the object of opinion, common sense, belief, and tradition. However, the spectator reactions are the antithesis of such ideas. The fig.2 approach is energy as vital to human life. It shows the discovery of unconscious desire from the wildness incited by the lack of energy in Venezuela. It also shows the direct relationship between energy and food, water, security, health, transport, politics, economy, etc.

Energy: People are gathered around a source of light in *An experiment on a bird in the air pump,* like most of Wright’s paintings as mentioned above. In this case, the light source is a candle made of whale oil. It shows the maturing process to reach all discoveries and sophisticated experiments of the Enlightenment: it was only 100 years after Wright's painting that became possible to produce durable lighting from an electric current through a carbon filament inside an empty glass bulb. Until then, in the 18th-century whaling ships spent years at sea hunting whales and stocking oil on board. After a long journey, they returned to their original ports to supply urban life with oil, the source for public lighting, and raw material for candles. Whaling was a lucrative economic activity until the 19th century, portrayed in the book Moby Dick (MELVILLE, 1851). Ishmael, a sailor, tells of the unfortunate voyage led by Captain Ahab for killing Moby Dick - a white whale, the antagonist. Besides the search for revenge, Melville describes the work - haunting whales - in detail, almost as a documentary narrative. Reinterpreted in the film directed by John Huston (1956) and illustrations by Bill Sienkiewicz (1990) and Christophe Chabouté (2017).

Melville wrote the novel in a context where whales were almost extinct. Going further, the discovery of oil saved whales from extinction, prevented firewood deforestation, enabled the agricultural revolution, and made the combustion engine possible in the 19th century. But today terrifies us for its finite nature, gas production, social conflicts, and large-scale ocean spills - as on the Brazilian northeast coast in November 2019. After 251 years of Wright’s painting, in a world supplied by electric energy, Venezuela has ceased to be an energy leader to become an “importer of oil, fuel, and electricity, suffering from severe energy shortages and frequent electricity rationing” (PIETROSEMOLI and RODRÍGUEZ-MONROY, 2019). So, *A looted Pepsi warehouse in Maracaibo, where the power was out for several days* impels us to learn that even though Latin America is rich in resources with ideal conditions for developing renewable energy, we see again that “social disapproval can work as a restrictive factor in achieving the ambitious governmental objectives” (SCOGNAMIGLIO, 2016). And I extend *social disapproval* as a more comprehensive concept which also embraces national policy and public management.

On the one hand, Costa Rica, Nicaragua, and Uruguay, which took ten years to reach the goal of having a 95% matrix from renewable sources, these countries due to public-private partnerships developed a regulatory framework to suit their goals. On the other hand, Venezuela has one of the largest hydrocarbon reserves in the world and is one of the largest hydroelectric energy producers, together with Itaipu in Brazil. With exceptional geographic and hydrological conditions, the Guri hydroelectric plant “supplied 70% of Venezuelan electric energy demand” (PIETROSEMOLI and RODRÍGUEZ-MONROY, 2019). A milestone in national history that reached an excellent level of 90% electrification, with a network spread throughout the country. However, the late 1990s public-private transition to a state monopoly where “the state-owned company Corpoelec assumed total control of the electricity sector” (BAUTISTA, 2012), converged in an energy deficit. Coupled with other several variables: lack of maintenance, inadequate investments, stagnant regulatory framework, purchase of old and low-efficiency machinery, unfinished construction after decades of work, an indiscriminate extension of subsidy policies, millions of dollars invested in the electrical system but inexplicably not reversed, electrical losses of transmission and energy distribution, and the scarce interest in promoting renewable projects to diversify the energy matrix (PIETROSEMOLI and RODRÍGUEZ - MONROY, 2019).

Both images build a panorama about the energy maturing process. From the ocean, to underground and now also from the sun, wind, and water. Nevertheless, energy production is not directly proportional to the amount of disposable resources and it depends also on social management and acceptance. In this sense, technology evolution provided efficient tools to achieve global power for 7.5 billion people (and going up!). And renewable sources today can reach the mundial goals in a scalable way (JEAN et al., 2015; TROLDBORG, HESLOP e HOUGH, 2014). But such scientific advances with unquestionable results become complex and ambivalent depending on human experience, with scientific advances that also serve to buffer the anguish of technological consequences - such as the whale extinction or oil spill.

Users: In fig.1 an audience of men, women, and children are gathered around the natural philosopher - the term *scientist* emerged later - to watch the experiment he is conducting. Coming together to learn about it… but also to be entertained. The room is lit by a single candle that illuminates the observers faces with a dramatic effect and stands out their reactions: the little girl observes the bird with fascination, her elder sister can not bear the circumstances and covers her eyes, her father tries to comfort and maybe to explain that all living creatures must one day die, the disregard of the couple in love, the stimulus and boy curiosity to discover the bird’s fate, the man reflective behavior about the philosophical implications of such an experiment, and an oblivious man of what is going on, counting in his watch how many minutes the animal had left. Going beyond the bird trapped in a glass jar, it makes clear the will to communicate science to a wider audience through devices and machines showing how the world works in a very direct way, like the orrery or the air pump - Wright commonly depicts. Another outstanding factor is the domestic settings for discussing science with the participation of children, women, men, and opposition to the laboratories and lectures in Royal Institutions occupied mostly by men. These groups were made of middle-class families, who paid for lectures at home to learn about the world and also improve agricultural production - learning to build water pumps for example.

In fig. 2, because of the sequential blackouts, there were big crowds of “more than a thousand people that suddenly gathered, looking for food” (CASEY, 2019) where stores were set fire because it was dark and they could not see inside it. “Burn the store to see what you are stealing”

(CASEY, 2019) is depicted in fig. 2, where a boy after the destruction tries to find something left.
In this scene, he is alone in a large space full of rests from the nights before. Numerous empty plastic bottles are on the ground and with a bag, he is probably trying to pick something to drink.

Somehow do people see themselves transfigured by these visions? In Fig.1 science and knowledge are seen as a way to better conditions and status. However, in Fig.2 the user is alone and shows a rupture from such structure.

Exhibition: Fig.1 is an oil painting with dimensions of 1,83 m x 2,44 m. To choose to paint in oil an apparatus like Boyle’s air pump, a subject usually found in scientific journals, is innovative and a strategy to raise its status. Considering that the painting is exhibited in room 34 on The National Gallery, London, alongside works by John Constable, George Stubbs, and William Turner, Wright’s will was well succeeded. The image extracted for this paper is from The National Gallery website and available online for download with free access and wide audience reach.

Fig. 2 is a photojournalism exposed in The New York Times to cover and inform the public of what was happening in Venezuela in real-time. A version of this article appears in print on March 16, 2019, Section A, Page 7 of the New York edition with the headline: *‘There Was No Authority’: Blackout Sent Parts of Venezuela Into Chaos.* The online version, which digital revenue exceeded print for 1st time for New York Times Company with 6.5 million total subscriptions, a figure that includes 5.7 million digital-only subscriptions, putting it on a course to achieve its stated goal of 10 million subscriptions by 2025 (TRACY, 2020). It was the digital source for the figure exposed here.

Therefore, the colors and figures that you see are made by light. Made by RBG colors specified by red, blue and green, defined by integers between 0 and 255. It is a color scheme that is associated with electronic displays, such as CRT, LCD monitors, digital cameras, and scanners based on the primary colors. In this sense, both figures act as a way to inform and raise the status of the subject discussed. And both succeeded, informing to a wider public their perspectives. However, the information depends on energy to survive: in museums with perfectly controlled climate, or electrical devices. It is possible to infer that this intrinsic relation to energy also reaches aspects regarding art, data, and access to information.

Architecture: Wright's depiction shows a private house where a lecture is happening maybe in the living room whose energy source was the fire. In opposition, fig.2 came about in a warehouse structure by metal, with big dimensions to store products and powered by electric energy. Both of these places are apart from the narratives and do not represent anything regarding energy. They are energy outsourced and act only as a background.

Conclusions

In conclusion, energy can directly be related to the provision of food, water, security, health, political and economic balance, art, data, information, among others. Even with such importance in human life, the social link with energy production and consumption is not linear and unquestionable. This ambivalent relation can be noted from the comparative approach regarding fig.1 and fig.2. First in a narrative where all types of reactions can be seen from spectators about the scientific experiment.
Second, in a country whose one day was a world energy leader, today's social disapproval and lack of management can result in an energy deficit.

Besides, it is possible to conclude that moral problems cannot be solved only by the technical aspects of utilitarianism. Questions of a moral nature go beyond the technical evolution of science and to approach energy as a result of technique alone, is to hinder its development. For instance, with a mission to educate the public about the negative impact of building large-scale solar plants for farms, forests, and communities, *Citizens for responsible solar* is a group that protests against "destruction of the rural landscape of Virginia" (CITIZENS FOR RESPONSIBLE SOLAR, n.d.) and have already prevented the installation of solar energy projects. In this sense, architecture is capable of relating energy to the shape of our buildings (or clusters of buildings or even cities and landscapes) and act as a mediator between these forces.

From the analysis, it is also possible to see that such a stance is incipient and the discipline sees energy as a type of abstract variable with which design can not deal with. In fig.1 and fig.2 architecture still acts as a background where energy is outsourced from means that are distant from where people live. These tacit agreements are important to provide a more secure and stable energy matrix, also as a way to improve the quality of human life. In opposition to such resistance, according to Allen (2020) in the press article published online by *Harvard University Graduate School of Design*, "the pandemic has caused an unprecedented reckoning with digital culture" where architecture is increasingly a discipline plugged into apparatus and electrical devices.

To conclude, fig.1 raises the status of science and shared knowledge through experiments and devices. While fig.2 shows a rupture from such an establishment. But resorting to history and the plurality represented in *An experiment on a bird in the air pump,* Wright also questions this statement. If we analyze his last works, for example, fig.3 *Virgil's Tomb by Moonlight with Silius Italicus Declaiming* (1779), he painted landscapes until the end of his career and moved away from the rationality subjects as a way of rejection. Hence, both figures question: is it the best way to understand nature is only by technical means?



Fig.3

Acknowledgment
The authors are grateful for the funding of this research by the ANEEL/COPEL project PD 2866-0470-2017.

Image Captions
Fig. 1 An experiment on a bird in the air pump (Joseph Wright 'of Derby', 1768)
Fig. 2 A looted Pepsi warehouse in Maracaibo, where the power was out for several days
Fig.3 Virgil's Tomb by Moonlight with Silius Italicus Declaiming

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Two perspectives on design culture
From architectural design to metadesign

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Abstract

In this work, we propose a critical approach to the architectural design in confrontation with the theoretical thoughts of metadesign (Giaccardi 2003). From Argan's notion of *Cultura del Progetto* (1983), the architectural design is based on the construction of an architectural type with no individual characteristics - an "empty shape". This idea of design starts from the past and then transgresses it, because "one never designs for but in opposition to something or someone" (Argan 2000, 53). Although it questions the authority of the model, the knowledge of the past is essential. However, four decades after the term metadesign has been coined by Onck in the 1960s, Giaccardi suggests that we think of design as a social-technical environment, a type of action called designing the "in-between". Immersed in a "new culture of participation" (Fischer 2012), the framework of Giaccardi's metadesign proposes to envision the action of underdesigning (Fischer and Herrmann 2015) as an alternative to conventional design. This new approach takes the users as facilitators of a problem's solution at the use-time (Sanders and Stappers 2008). Now, knowledge of the past no longer guarantees the solution. This confrontation disturbs traditional binary pairs such as user-designer (retrieving Toffler's denomination of "prosumer"), design time - use time (designing at use time), and foresee - concretization (designer´s inability to predict). For the development of this critique, we compare the act of design to firing an arrow (a design idea) through a target (design problem), more specifically, the Zen Archer's image (Deleuze 1992; Herrigel 1984). In this image, the arrow transmutes the archer into the target, drawing a new relation between those two opposed binaries pairs. In transmuting each other, the role of each binary pair in the project needs to be repositioned and impels us to rethink the act of designing.

Keywords: Metadesign, Design Methodology, Architectural Design, Giulio Carlo Argan

1. Introduction

In 1983, based on the construction of the type and its criticism, Giulio Carlo Argan describes the design culture. This culture is believed to have replaced one dedicated to the model. Consequently, instead of perpetuating a model, a design was made in order to make a statement against something. Argan himself points out that such a culture, which has been perpetuated since the Renaissance, begins in contemporary times to show signs of collapse. In 2003, Elisa Giaccardi, a computer science researcher, writes about a possible new culture of emerging design under the name of metadesign. A type of design aimed at collaboration, interaction, and technology, which works through open and socio-technical systems (STS)[1]. In this second approach, the consumer gains relevance, as well as a society that calls for participation. Both authors seek to present a theoretical discussion of their understanding of culture by presenting several concepts. In that sense, what aspect of the design process is about to be shattered? What kind of transformation may be hovering around Giaccardi's idea of metadesign?

This research analyses these two theoretical frameworks from a theoretical-comparative methodological approach, through three conceptual pairs: designer-user, design time-use time, and anticipation-realization. Using the Zen Archer's image proposed by Deleuze (2009), where archer and target are merged, we propose to think about the dual character of those three pairs mentioned. Through this image, oppositions are questioned and barriers are transposed. New concepts and understandings of the design process emerge. All this considered, are we close to the emergence of a new project culture?

2. Methodological approach

The research employs a comparative method for systematic analysis of a small number of cases, "small N" (Collier 1993). This type of analysis allows, according to Collier (1993), to illuminate a specific set of concepts that guides comparative cases, consonant with testing theory through the judgment of rival explanations. Although not precisely the situation, the difference in time and conceptualization of the two cases analysed places their confrontation as an opportunity to understand the design process and the correlated theories. Collier (1993) notes that another purpose of the comparative method is to think of an interpretation of how processes and changes are carried out in different ways within each context.

To proceed with this comparison, a conceptual framework with three pairs (binary system) was built, one around Argan's proposition, and his "design culture"[2], the other focused on Giaccardi's Metadesign and his "Emergent Design Culture". This type of research instrument, a synthetic conceptual framework, has the initial function of describing and exploring the relationship between the main concepts of a study (Adom, Hussein, and Agyem 2018).

As a methodological resource to deal with the comparison of pairs (binary system), we propose the use of a specific image: the Zen archer (Deleuze 2009). It is based on Eugen Herrigel's book, "Zen in the Art of Archery" (Herrigel 1984), and constructed by the French philosopher Gilles Deleuze. Regarding this image, we are interested in the pair composed of the Archer and the Target, where the arrow becomes their link. However, in this book, the goal of the archer is not just to reach the target. As Herrigel (1984) explains, in this act, the archer and target are no longer opposing entities, but one, and also the same reality. We discussed an image that is not limited to simply recognizing that the opposite poles exist (archer, and target), but also the line that connects them, transforming one into the other. Here we appropriate the mental picture that Deleuze made in "The Logic of Sense" of a Zen archer and his target. Here, he states that the arrow slides over its trajectory line, thus creating its end. In other words: the arrow becomes its target. However, as Deleuze (2009) says, the archer must achieve both what is targeted and what is not. The designer-user; design time-use time; and anticipation-realization pairs, can be reasoned through this image that emerges in between, making each component forget itself, transforming one into the other. Thus, the arrow transmutes the archer into the target, reconfiguring the initially proposed binary system.

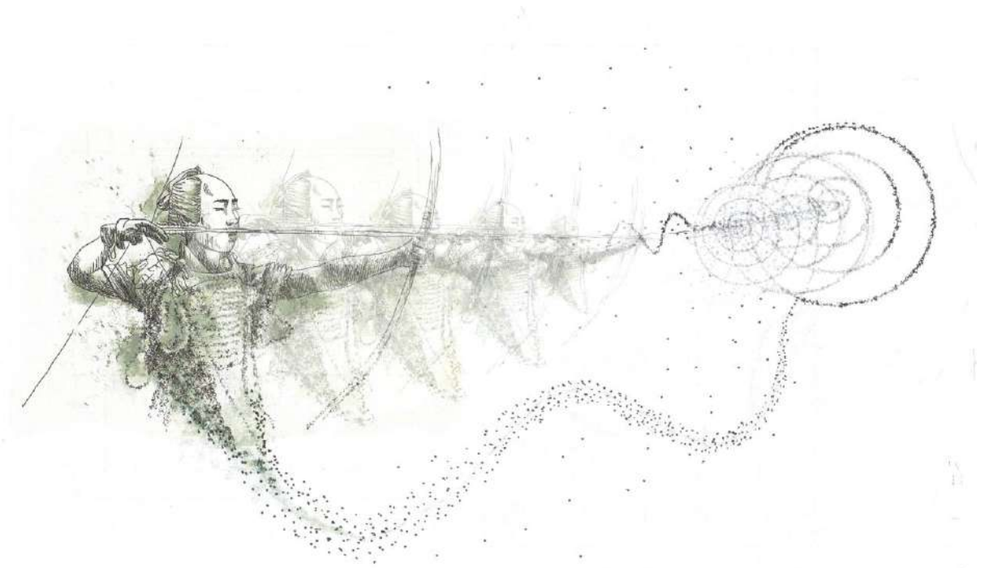


Fig. 1

3. Argan and Giaccardi's approaches

3.1 Introducing Argan's Design Culture

During a lecture in Lausanne in 1983, the historian and critic Giulio Carlo Argan described what he then called "Design Culture" and it's rising from a previous culture, one he called "Model Culture". In this previous Culture, the act of designing was almost that of a mere reproduction of the established models.

As stated by Argan (1993), it was Filippo Brunelleschi who first incorporated the humanist culture of his time into the act of designing. He did so through a transgression of the preceding way of conceiving, by seeing the act of design as that of intellectual nature, in which the designer anticipates the solutions an object requires before its technical execution. This idea was absorbed by all the ramifications of art, being thus firmed as a culture by the French Revolution. Therefore, designing was seen as indispensable to the execution of an object.

At this point, Argan (1993) organizes in four layers the actions that revolve around the designer during the time of conception, as well as how each correlate to the other. These actions are that of critical analysis and evaluation of the existent. It involves the characterization of the problem, thus directing to the election or creation of a typology through the exercise of memory[3]. After electing a typology, like an elliptical temple, for instance, we have an empty form, and then this void is filled by a hypothesis. Then there is a new stage of the design, which is the criticism and transgression of the historical type.

And how one relates to the other? The author affirms that their relationship is circular: the first requires historical knowledge (memory); the second, the critic of the existing memory; the third, involves an ideology and the prediction of posterity. When invoking the word ideology, the author clearly says that the act of design is embedded in meaning and intention. Therefore, for Argan (1993), designing is a teleological action, for one predicts the desired posteriority (archer and target). Designing, in Argan's conception, is an act of analyzing critically the current state of things, of comprehending it and, then, imagining the best as possible the future desired state.

Here, there is a small scheme that briefly represents Argan's approach in 4 layers:

(1) Starting from history, memory has the role to remember those experiences formed collectively that might be of use in the conception of the object.

(2) After analyzing these examples, an "empty form" of generic character is extracted, a "type" that annuls specific characteristics.

(3) Here, the designer searches for a hypothesis to fill that empty form, to propose a criticism of the reality as it is. After all, it is vital to criticize the existent to design something original. "One never designs for, but in opposition to something or someone" (Argan 2000, 53).

(4) At last, through the exercise of imagination, the final form of the object is conceived in a teleological way.

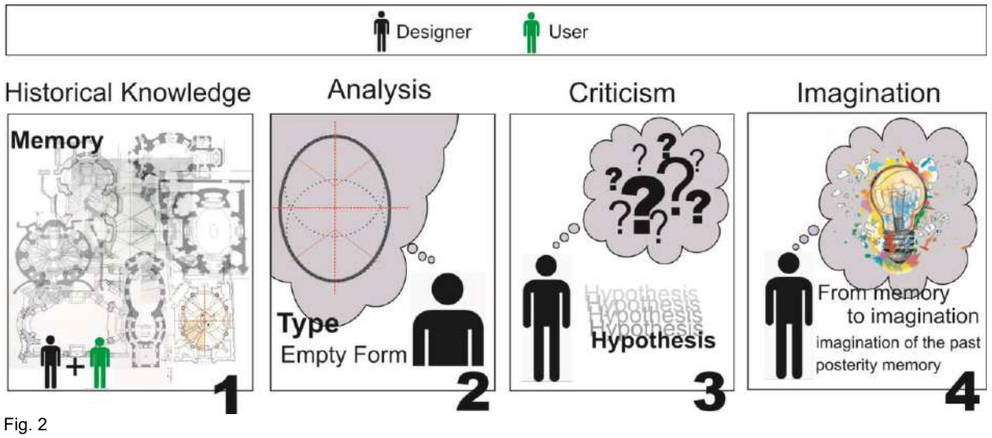


Fig. 2

3.2. Introduction to Giaccardi's metadesign

The word metadesign arises from the discussions regarding semiotics and metalanguage at the Ulm School of Design in the 1960s. In Van Onck's *Metadesign*, he intersects those subjects to think of an act of design that doesn't produce a final static object. He conceives it as something that precedes the design of the object itself, as a tool, an artifact, or a system that would allow a metaobject to be created. Then one specific object could thus be picked from this range of possibilities.

It was in 2003 that an even more transgressive view of metadesign emerged. Through the study of Gene Youngblood's "*Metadesign: Toward a Postmodernism of Reconstruction in Ars Electronica Catalog*" – which regards electronic art, Elisa Giaccardi brought a new perspective on the subject based on participation, anticipation, and socio-technical systems STS. Those would allow designers to share their work, which would be modifiable throughout the moment of use while also bringing the user to the position of the designer (Giaccardi 2003).

Due to the contemporary's continuous social and technical evolution, and also the conflicts of interest and power concerning such aspects, Giaccardi (2003) saw metadesign as the possibility to create conditions and tools to give people the power to engage in participation for continuous change. Here, users, who are the so-called "owners of problems", (Fischer 2002) would be seeing as participators on the solution of the problems insurgent at design time (Sanders and Stappers 2008), under the new "culture of participation" (Fischer 2002). It is valid to foreground that Onck's and Giaccardi's conceptions do not rule out one another, but one comes to complement the first, as it adds more temporal layers to the process.

On the whole, it is possible to affirm that the metadesign process is then constructed under three pillars: interaction, collaboration, and socio-technical systems (STS). Nevertheless, this approach can be better understood if the exploration of the prefix *meta* is made clear. In doing so, a proposition about in which spheres the metadesign process should occur can be brought up, coming up with an "upward spiral" towards co-creation and co-evolution (Giaccardi 2003) (Giaccardi and Fischer 2008). Thence, three levels of design emerge, and one leads to the other as the timeframe changes during the process:

- Meta as ''behind" – Designing Design: In this first level, design engulfs interaction as a mechanism of content and context modification to respond to the conflict between what can be anticipated by designers and what arises from use. It moves away from users' engagement with finished goods and closed systems towards end-user programming, from a centralized design to collaborative creativity (Fernandes, 2019).
- Meta as "with" – Designing together: The second level is related to collaboration, or how to instruct an environment where designers and users can work together at the design process. It involves providing a framework through which users can "become lifelong users and designers" (Giaccardi 2003), moving towards a continuous condition of design and collaboration. In this case, anticipation grows to a way of participation related to cooperation with sociotechnical tools, allowing the focus to shift from a purely technical perspective to more emotional and intersubjective motivations.
- Meta as "between/ among" – Designing the in-between: the last layer regards supporting existing networks and designing new relational spaces, always aided by the computational spaces and interactive tools accessed at use time. This is the context where people and technology negotiate, and

where co-creation and co-evolution can happen. Here, the design is not predetermined, and users can be embodied emotionally and spontaneously.
Summary of Giaccardi's approach in three levels:
(1) It is based on the belief that previous experiences are insufficient to anticipate the future, and the design must be conceived in an evolutionary and underdesigned way.

(2) The criticism must be made in collaboration with the users (for they are the owners of the problem), and the imagination also comes from them.

(3) Collaboration must happen at use time, involving want-to participation and lifelong learning in a non-teleological manner.

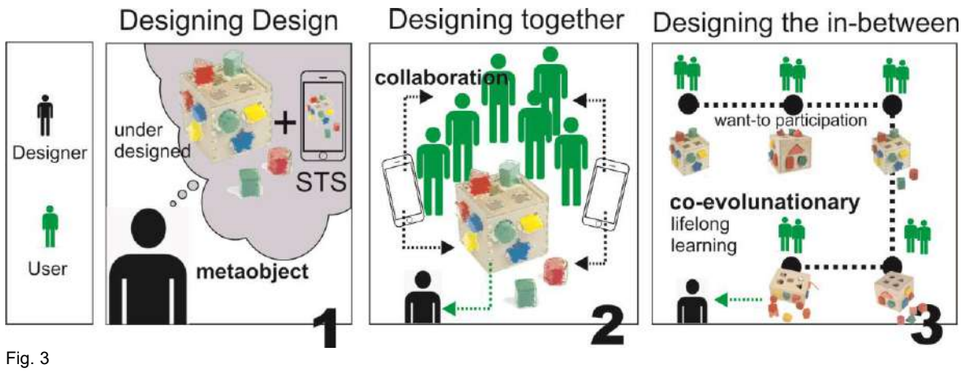


Fig. 3

4. The three pairs of the analytical binary system
After comprehending the design culture as proposed by Argan (1993), one must understand what was the role of the designer in this scenario, as well as the association between him, the object designed, and its user. Then, it can be understood how these roles are disrupted by Metadesign (Giaccardi 2003). To draw this analysis, we will proceed with the understanding of these roles as seen by the perspective of the opposing binaries they form: designer-user, design time-use time, prediction-execution.

4.1. Designer and user
In Argan's view of design, it is the designer who has a central role in this action. That means the author believes it is the designer who must produce an object which is a transgression of a typological synthesis of history. In doing so, what differs each user and their context is diminished to fit in one single object. Argan places the user as a static being throughout history and time, and presented as such, it is the architect's role to synthesize him. The user transfers to the designer the capacity to reduce all imagination and differences to a single common and abstract type.
However, for an object to have meaning, it must involve someone, a user, for whom the object exists. In this case, it is the designer's part, through historic and collective memory, to produce or choose from the "empty forms" that consist of the architectural types which one fits best to the user's request. It is important to stress that it is the designer's role to develop a critique of the existent himself through his knowledge of the world and his ideology. Argan (1993) suggests that such an "empty form", a product of the aforementioned reduction, must be transgressed, leaving the architect again to interpret the ideologies and cultural aspects that need to be altered. The act of designing is one of teleological function, where the art of the architect is in his ability to interpret.
Hence, the object here is a reflection of a user's need as seen through the lenses of the subject who designs it, existing for a different time from that of its conception, and it is the designer's task to predict all the possible scenarios that involve the object's existence, as well as its relationship with the user.
As for Giaccardi (2003), she suggests the need to promote the user as a designer or, more specifically, to the center of the design process (participation culture), using the expression known as User-Centered Design (UCD), as well as co-design or co-creation. In this case, the designer shares his role with the user, known here as the "problem owner" (Fischer 2002), for Giaccardi does not believe the designer to capable of fully understanding the design problem on his own. Fischer defines a designer as anyone who wishes to engage actively in the contribution to activities that are meaningful to themselves.
Therefore, the object needs to be underdesigned, as opposed to being a final object, and it is the designer's effort to incorporate mechanisms of variability that allow the user to modify and complete it.
The teleological character is reduced, as both designers and users are not exactly aware of what they want the object to be. Therefore, the design action would also be a moment of leisure and fun (to create what Fischer (2016) calls want-to participation), so that the user could take the lead and incorporate his role as an active designer.

4.2. Design time and use time
First of all, it is important to understand what is meant when using the terms design time and use time. Design time, as here referred, is the time of conception of the object, traditionally enrolled to the designer, most consonant to Argan's view. Use time, on the other hand, is known as the moment the user engages with the final object (Fernandes 2019). Argan (1983) dedicates most of his study to design time, giving the impression he believes it to be of uttermost importance, while he gives almost no thought to use time, for he regards as true the designer's ability to propose an optimal solution to user's needs. He does stress that the designer is not capable to solve all design problems which will appear at use time, but he has faith in the architect's judgment and hypothesis to be the best possible for the situation at hand. When indicating design time, the author mentions the execution of the object, hinting that a design can be changed while the execution is being made to incorporate adjustments. But once the execution is done, the design is final. Argan values design time as it is the occasion when the transgression of the type and the production of the object occurs.
Giaccardi (2003), in contrast, values use time most. From the metadesing perspective, design time and use time are no longer separated, as design time is extended through use time. In Metadesign's proposal, there is a suspicion about the project's inability, at design time, to fully anticipate future uses and problems (Fischer 2012). Giaccardi and Fischer (2008) believe the design of an object to be the moment of interaction between it and the user, thus happening at use time. This makes metadesign push the boundaries linking the so established binary opposites of the classical design, bringing forward new relationships between user and designer, while also modifying the notion of design time and use time (Giaccardi and Fischer 2008) (Fernandes 2019).

4.3. Anticipation and realization
Argan trusts the designer's ability to anticipate the future regarding the object's use time. However, in his point of view, this trust can only go up to a certain point, for he does admit that not only it is impossible to predict all conditions at use time, but it is also a problem consisting of the designer's role to determine future conditions of existence. Since designing is not an exact science, one can never foresee all its future unfoldings, yet this action is always a projection of the present into the future according to Argan's judgement. It is important to restate that Argan believes the "design culture" to be a transgression of the "model culture", precisely for considering that the designer could no longer be subjected to the model, proffering the need to transgress it. Giaccardi, nevertheless, does not place confidence in the designer's ability to anticipate the future, thus raising the doubt that he cannot be able to predict what will the conditions be at use time when the object – user interaction occurs. From the meta-design perspective, the prediction is thence substituted by adaptation, evolution, and interaction (Fernades 2019) (Fischer 2010).

5. Discussion
From the comparison between the two thoughts concerning design, new concepts emerge from the fusion of each of the analyzed binaries, as meanings arise from the space between poles. What can this merger mean?

5.1 User-designer → Prosumer
The first sign of an ending of the barrier is found when there is no longer a separation between the ideas of well-defined groups. For example, the professional, endowed with specific knowledge, and the layperson, holder of daily knowledge. This shock comes from the very emergence of a "culture of participation" (Fischer 2012), enhanced by the emergence of web 2.0 (interactive internet) and the trivialization of life on social networks. Thus, such a clear division between user and designer seems to be blurred, as commented by Fischer and Herrmann (2015). Control becomes distributed among all stakeholders in the design process. This conception goes much further than the vision of "individual activity" and another "collective" as presented by Argan (1993). In the wake of this culture, a reading of design emerges with attention more than ever focused on the user, with End-User Development (EUD), User-Centered Design (UCD), or User-Driven Development (UDD), and the appearance of a new character: the user-designer. This reading, anticipated by Alvin Toffler in some way in the 1980s, is reflected in the "*prosumer*" (producer + consumer). This neologism is also an important mark of this culture: its characterization by a society founded on consumption. The birth of the "prosumer" characterizes the empowerment of the consumer for whom the industry is more than ever forced to produce what is demanded, undermining its monopoly on the supply chain. Consequently, the producer directs more and more strategies to satisfy the consumer who, increasingly insatiable and spoiled, as in a Skinner box of likes, generates a more profitable environment. Here, it is clear that there is the danger of exacerbating a kind of self-market, aimed only at feeding a narcissistic identity.

When this culture approaches the creative process, equally, it has the immediate effect of questioning the monopoly of decision and creative attribution of the designer, with the power to shake the more corporate and disciplinary structure behind the current culture. On the one hand, it suggests that the designer will need to deepen his knowledge and his ideation of the act of designing. He will need an increasingly interdisciplinary knowledge, and less specialized in very restricted domains, as it will be important for him to be able to correlate and understand the user and his relationships. The designer will also probably need to reposition the role of his creative act, placing his effort more on the meta-object (systems, structures, patterns ...) than on the object itself. If not, there is a danger of disappearance of the most intuitive and less systematic knowledge of the designer, focused, for instance, on the final artistic expression of the object, which may not be reached by the vision of the common user. After all, it does not seem to be only about professional delimitation, or some kind of more corporate approach, but also about long-term skills and training in the act of design.

5.2 Design time – use time → Design in Use Time

The second possible transformation modifies the very conception of what it is to use something. The proposition of bringing the user closer and more empowered to the design process already has more consolidated roots in the propositions of Participatory Design, Co-operative Design, and Co-Design. These approximations between designer and user are clear in the so-called design time. However, what is proposed in Metadesign is that the design transformations occur at use time. That is a temporal territory completely dominated by the user where the designer was absent most of the cases (except for methodologies of post-occupation evaluation). As Giaccardi and Fischer (2006) say, there is the need to go “beyond user-centered design and participatory design”, towards the extrapolation of the effort of a few creative minds in favour of a type of “social creativity” (Giaccardi and Fischer 2008). For this collective effort to happen,it is imperative to think in a co-evolutionary way (Giaccardi 2003) (Giaccardi and Fischer 2008). In doing so, different users can collaborate throughout the lifespan of an object or product: lifelong learning design (Fischer, 1999). For this whole process to take place, it is up to the designer to underdesign the very object to which he will dedicate himself, an action that does not mean less work, but more effort: to propose an object that is not only “incomplete”, but also providing conditions for the user to complete it, while stimulating action. This attitude involves concepts such as want-to participation (Fischer 2016) and experience economy (Pine and Gilmore, 2011), which propose or promise a new relationship between the user and the designed product.

The concept of design, as explained by Boutinet (2002), brings with it a contradictory relationship with progress, for it partially aims to progress and launch itself in the future, while at the same time being attached and committed to the past’s references.

However, the Metadesign approach seems to introduce a reading of continued design, linking times of use and design, when design decisions would no longer be in the past (like in Model Culture) or present (like in Project Culture), but in the future. Something similar to what Deleuze (1992) says about a type of continuous control that would dematerialize the notions of beginning and end. It would be up to the designer to follow somehow the allotted span of the object, a type of extraordinary control that will only be possible with the evolution of electronic devices and the internet of things. The designer ends up paradoxically controlling more and, consequently, less the designed object. Another essential aspect for this to happen is the need for the object to incorporate variability in its underdesigned format. An ever-greater shift is perceived for the digital interface and, when possible, for immateriality. There is thence the rise of an experience economy, where consumers increasingly play an active role in obtaining their own experiences (Ritzer, Dean and Jurgenson 2012), which may bring social media and built spaces closer. In this scope, there is also a latent danger of experiences becoming increasingly superficial and ephemeral, placing the designer face to face with the temptation to be content with the simple interaction of the user with surfaces. Again, the more artistic the object, more it requires sensitivity, thus demanding more effort to engage with the users.

5.3. Anticipation - realization → Anticipation underdesigned.

The designer is driven by a type of faith (Jones 1976), but he cannot be so blind as not to see things can happen in an entirely different way from what was imagined. Boutinet (2002) notes that anticipation involves an ability to momentarily suspend the course of things, to imagine how this progression will evolve, at the same time, endeavoring to change the direction of events if necessary. As the Deleuzean vision of the Zen archer proposes, the arrow can become its target, therefore producing itself. The design in this approach seems to somehow give up, in its underdesign proposal, truly predicting the behaviors of the future. Moreover, the design proposes opening up to interact with such future conducts, focusing much more on achievement than on predicting. The designer reduces his more teleological pretensions, to be able to deal pragmatically with the reality and incompleteness of his object. Anyhow, he still thrives on some kind of hope and sense of anticipation, as he believes to partly predict the possible interactions that an underdesigned object will allow. Here, there is a final warning: prediction cannot be confused with imagination, for any naively blind belief, in reality,

produces a threat to the imagination of new worlds completely different from the existent. One cannot ignore the danger of a society that only consumes, driven by a herd and mechanized behaviour.

> “It is of no use to have imagination if there is a technological apparatus that produces images, and which offers us images to consume in such an amount that the activity of imagination becomes that of reception, and not of action” (Argan 1993, 07)

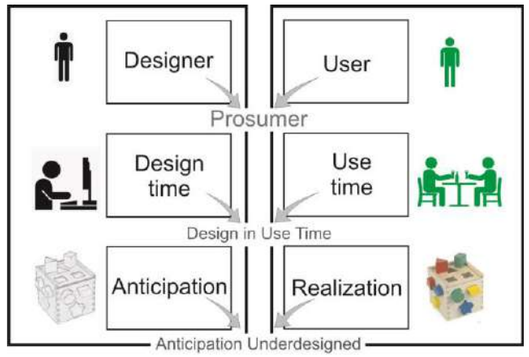


Fig. 4

6. Conclusion

The two design approaches start from different perspectives about the design culture and its discussion in society. Argan's perspective is more distant and broader, a historical point of view, aimed at the insertion of design as cultural action. Thence, design starts from a broad reading of the community, sublimating the individual wishes of users to highlight design as an artistic expression and assign the designer the responsibility to think posterity. On the other hand, Giaccardi's metadesign dialogues with the society of consumption and interaction, returning the action of the project to the most immediate moment. It seems to distrust the power of history as a guide for the actions of the present, as well as the designer's capacity for anticipation. This second perspective seeks mainly to involve the community and its needs, seeking to collaborate with the non-elitisation of design as art.

These two approaches can be positioned in a binary way. However, the insertion of the new approach has pointed to a fusion of elements hitherto seen as distinct, sometimes even opposed. Like the arrow that links the archer to the target, no longer making it possible to discern one from the other, the disruptive movement that metadesign produces leads to new concepts that blur the limits of the old ones, threatening the more traditional readings of design and designer. Our great challenge is to find the space between artistic expression and the propagation of design with collaborative processes, with attention to the dangers of the most narcissistic consumer society.

Notes

1 “Socio-technical systems [STS] consist of components, which are social structures, and artifacts, which are technical elements that contribute directly or through other components to a common system goal. (…) Within the system are components and artifacts that interact. Technological systems are both socially constructed, and also help shape social structures” (Dwyer 2011, 4).

2 We use the term "Design Culture" to translate what Argan defines in portuguese *Cultura do Projeto* as a substitute for "Model Culture" from the Renaissance. “The Culture of Design” has been used to distinguish a new discipline. This last discipline investigates the interactions of design producers and consumers (see The Culture of Design by Guy Julier).

3 In this case, the type is not a kind of Platonic prototype, but the deduction is made from common characters among objects of the same categories. Citing Argan’s example, if one wants to know what the type of a circular or elliptical temple is, one should take all circular or elliptical temples known, make a comparison between them and isolate the characteristics highlighted in all the examples taken. Here, constants are deduced, such as proportions, number of columns, the relations between the columns, and the other parts of the architecture, being then an analysis extendable to all objects. This analysis destroys the specific characteristic of each object to isolate a function, or a typology that is always related to a function. It is always the idea of a function related to space, which has no formal determination in itself. It is the moment when the historical background is entirely terminated. One goes through, for instance, all the circular temples to isolate this idea of a circular temple (Argan 1993).

Image Captions

Fig. 1. Zen archer and his target, when the arrow slides over its line creating its end. Author's figure.
Fig. 2. Scheme of representation Argan’s approach in 4 layers. Author's figure.
Fig. 3. Diagram of Giaccardi's approach in three levels. Author's figure.
Fig. 4. Scheme of the three pairs and their respective fusion version. Author's figure.

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Biography

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Bicianimita

Dispositions for a new counter-monument in Santiago de Chile

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Abstract

The *Bicianimita* appears on the scene in 2012 after the death of the cyclist Arturo Aguilera, when, for its commemoration, the link between the *Bicicleta Blanca (White Bicycle)* and the *Animita* appears. This relationship connects, in a juxtaposition of symbolic images, a popular practice with religious characteristics with a civic practice with political characteristics through a process of synthesis that generates a new form of popular production, which has progressively begun to gain autonomy from its predecessors. Thus, this article suggests the ability of this new form of popular production to shape a *counter-monument* and emblem of resistance in public space based on the new meanings it incorporates and represents for the citizenry.

This article centers on one of the aspects of the *Bicianimita* that I have elaborated during my Master's Thesis in American Aesthetics (PUC), and, for its development, focuses on the historical parallel that exists between the origins of the practices of the *Animita* and the *Bicianimita*. Two authors who have developed theories on these cases are contrasted with two authors who have addressed the problem of public art and its link to popular feeling in the contemporary city.

In this way, the *Bicianimita* emerges as an alternative and underground form of community public art, which acts in the city in an active and sensitive way through the activation of different citizen layers in favor of specific and collective causes.

In conclusion, in the public space, the *Bicianimita* behaves as a form of popular religion and intervention of public art and resistance, questioning the ways of making the city and representing the feelings of the neglected communities.

Then, is the *Bicianimita* a form of public art? Are social movements transforming triggers for popular practices in public space?

Keywords: Bicianimitas, resistances, counter-monuments, public space, juxtaposition.

The case of the Bicianimita

“The work is a large empty space or under construction that is always being filled with new content, new images.” [1].

On August 10, 2012, Arturo Aguilera, a 28-year-old cyclist, and designer, was riding his bicycle when a reckless motorist hit him, causing his death. The accident happened at one side of the Santa Isabel subway entrance in the Providencia district. On the site of the accident, a small house was built to commemorate the casualty, in accordance with the popular practice of the *Animitas* in Chile. However, unlike what had happened in other similar accidents up until then, a white bicycle was installed and tied to a tree on the top of the small house of the *Animita* by the citizen group “*Ciclistas con Alas*” (*Cyclists with Wings*) [2], in a form of translation of the international practice of the *Ghost Bikes*, heirs of the Dutch *Provo Movement*. The event inaugurated the *Bicianimita* as a new popular practice in Chile[3].

The interesting aspect about this new urban practice is that it is developed from an existing popular practice, where the *White Bicycle* is added, juxtaposed with the *Animita*[4], initiating a process of reconversion of the original model and transforming it into something else. This happens when the *Bicianimita* incorporates the different signifiers of the distinct cases in a particular process, both synthetic and symbiotic, that begins to differentiate it linking it with new themes that gradually start to disassociate themselves from the purely religious and popular to place it with more political relations related to resistance and citizen complaint. This new characteristic that is displayed in the *Bicianimita* links it to social and activist organizations concerned with the right to the city, especially the rights of cyclists and the democratization of public space.

In this way, this article intends to study the *Bicianimita* as a new popular contemporary practice of the city, more complex and polyvalent than the *Animita*, according to the new political implications that are starting to be revealed and that complement it. This article will investigate the factors which appear in the *Bicianimita,* that, due to their new relations with the city and the public space, bring it closer to the figure of the counter-monument related to processes of social convulsion in the terms of the researchers of the *Animita,* Ojeda, and Torres[5].



Fig.1

The miraculous dead of the 19th century and the appearance of the Animita

The processes of social unrest shaped and produced the *Animita* as a synthesis of previous processes, incorporating characteristics that have been perpetuated over time, such as the cult of the dead and miraculous souls, placing these monuments as components of popular culture and religion that have developed in parallel to the official. In this way, popular agitation is closely linked to the acceleration of processes of identity creation and generation of products of popular culture, forging iconic images that represent popular sentiment and that build dialectics over public space.

The cult of the "miraculous" dead in Latin America is closely linked to traumatic occurrences[6] that happen in and between nations. Ojeda and Torres highlight that "historical antecedents allow us to situate the appearance of the cult of the miraculous dead in a period marked by fights for independence, civil wars, and wars between the nations of the American continent"[7]. The particular aspect is how subalternity, through the notion of Popular Culture[8], produces its own saints in parallel to the official production stipulated by the Catholic Church and the State. Many of them originate from the death of models who -in the eyes of the Church and the dominant morality- would be far from representing the values of officialdom (as in the case of the "fusilados"[9]). These popular saints, emerged in their majority between the XIX century and the beginnings of the XX century ("independentist and republican Chilean-Argentinean period, between 1810 and 1925"[10]); they appear in years of internal fights, a war for sovereignty and of independence[11], of tragic, political, vindicatory, popular and massive events. These moments of the appearance of feelings of belonging and nationalism turn popular figures (bandits, criminals, martyrs, and heroes) into saints of the people[12], typical of peregrinations and popular cults. Later they will be converted into "miraculous" figures, as they grant the favors they are asked for by those parishioners and devotees who worship them[13].

Thus, during the consolidation of the American states, the cult of the dead and the souls - typical of the pre-Hispanic culture - revives and is reconverted in Chile into the practice of the *Animitas*, as a renewed praxis linked to the appearance of the popular and national feeling. The radical re-codification of cults results from a fragile and volatile scenario of transformations that are occurring in a territory that is beginning to reimagine, rearrange and establish itself as a new culture, neither pre-Columbian nor European.

In this sense, the re-consolidation of the cult of the dead and the appearance of the miraculous dead in Latin America in the 19th century is closely linked to the idea of the popular, the counter-cultural, and the subaltern. These characteristics are represented in the development of the *Animitas* during the XX and XXI century, and, later, they are purely perceived in new manifestations, such as the emergence of the *Bicianimita* in 2012.

Social movements of the XXI century and the appearance of the Bicianimita

After the social movements of the 60s and 90s in the world, that turned from activist to political movements, with the beginning of the next century, in Chile, a large number of events and social movements of different types occur (like Tunnick in 2002[14], the Penguins’ Revolution in 2006[15]) with a common dispute over the public and the manifest on the ground of the city. In parallel, there is also an increase in the number of citizen groups demonstrating against the hegemony of the automobile and against the culture of highways in large cities, which causes a revaluation of the bicycle as a vehicle and a symbol of struggle, in line with what is happening in other parts of the world. Consequently, it is no coincidence that in 2012 the *Bicianimita* emerged as a product of the cross between a practice both popular and rooted in the American culture (the *Animita*) and an industrial element with a political and performative meaning (*Ghost Bike*).

In this way, since the Social protests of October 18 in Santiago de Chile[16], it appeared, among other things, the mutation that occurred in some cases of *Bicianimita* and the emergence of other different memorials in the areas closest to the place where most of the citizen demonstrations took place, where it became evident that the *Bicianimita* began to free itself of heavy constructions and structures (more related to the *Animita*) to turn more and more light and ephemeral. As a discovery -which becomes stronger evidence in light of the memorials that began to flourish as a result of the Social protests-, the loss of the floor as support and space of primary fixation appears. This is due, in part, to the manifestations and agglomerations of people in public space that make the floor a vulnerable and dangerous plane for memorials like the *Bicianimitas* (because of its structural fragility). Thus, the ground begins to lose objects which are now beginning to be placed on higher levels and against resistant and fixed structures, which can bear the urban pulse. Hence, the objects are detached from the floor and fixed or tied to resistant elements configuring a more suspended and dynamic relationship, less and less basal and static. In this sense, the material loses ground in relation to the message that presents itself as more resistant. Therefore, the immutable opens the way to the mutable. And it is evident how social movements accelerate the process of use and appropriation of public space in a dynamic and less static way.

The deduction that can be made about the *Bicianimita*, from its appearance until today, reveals how its structure has evolved, distancing itself (more and more) from the little house as a signifier and making the poster an instrument of remembrance and complaint. It acquires in this way a political-activist role, in parallel to its character as a memorial and sanctuary. Furthermore, it is manifest how the objects follow more "profane" concepts than in the *Animitas*, strongly alluding to the civic and cycling condition of the deceased, making use of the *Bicianimita* as an instrument of denunciation.

Finally, it can be observed that all the *Bicianimitas* appropriate the immediate public space, turning it private[17], and not only by appropriating the ground, but the nearby air (space) as well, through the connection with close structures which extend the limits of the appropriated territory, building a space detached from the ground. In this way, the center of gravity of the *Bicianimita* is relocated in the bicycle, moving from the house, from the ground, and even from the deceased. An industrial element takes precedence: serial, repetitive, and synthetic, over a handcrafted one: singular, unique, and organic, as an articulator of the image. Therefore, the *Bicianimita*; as an image, landmark, and symbolic icon, is implanted[18] in the (public) space, marking it, resignifying it, and appropriating it, both because of its characteristic of *Animita* and its new characteristics that place it as an element of the complaint. The *Bicianimita* builds a message of denunciation composed of a poster and objects, that, along with generating memory, complement and articulate the complaint and the injustice.

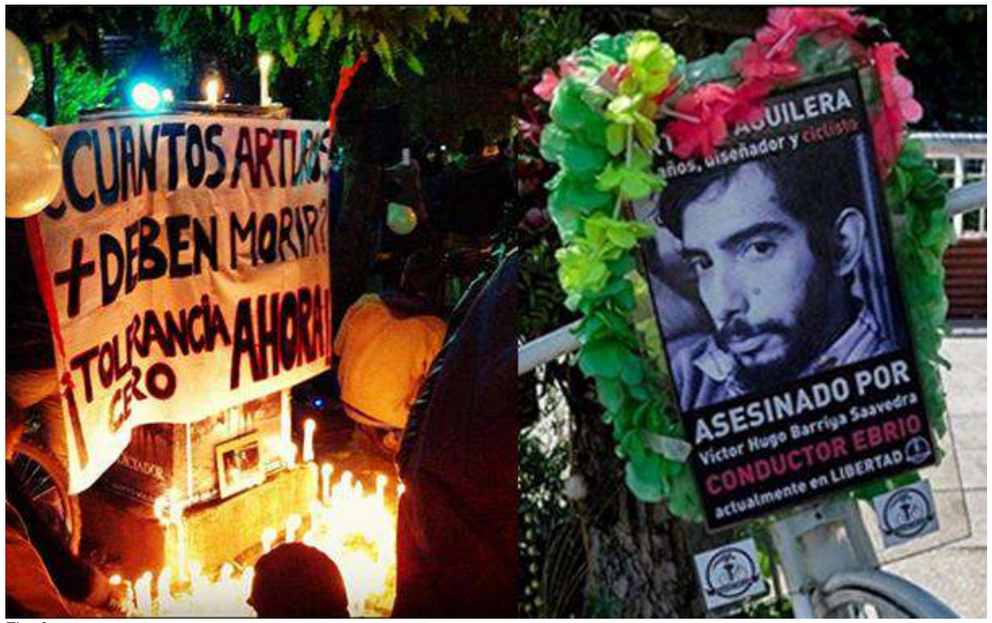


Fig. 2

Dispositions for a new urban counter-monument

On the other side, in reviewing the social and political component of the *Bicianimita*, along with the spiritual and religious one, a more complex reality can be noticed in comparison with its simple recognition as a particular family of *Animitas* to which a bicycle is attached on the top, which makes them similar to foreign *Ghost Bikes*. The *Bicianimita* is the synthesis of a juxtaposition of different cases that manage to remain active simultaneously, transforming it into something different. Because of this reason, the *Bicianimita*, as a practice and as an image, is inserted in the local environment as a mediator of circumstances and contingencies; one, that acts in a sphere as an enabler of the memory of a deceased (as a materializing agent of its absence) and, another different one, that establishes messages and dialogues that construct manifestos which represent aspirations, proclamations, and social upset[19]. Hence, in the body of the *Bicianimita*, the different gears, that result from the distinct references that had been building it, are observed acting altogether and out of phase; the *Animita* is perceived acting together with the synthesis of the pre-Hispanic practices and, with the *White Bicycles*, the *Ghost Bike,* and the *Provo*, as well.

Therefore, the *Provo*, inaugural reference of the *White Bikes*, originates from the counterculture of Amsterdam in the sixties to report the social injustices that had been occurring. The *Provo* operated by adopting strategies from the art world to establish a political dialogue in the city, especially in public space. It articulated its discourse taking ideas from Herbert Marcuse, *Dadá*, the *Happenings,* and anarchism, to build a message of complaint and proposals that would allow citizens to reappropriate the city. That proposal-manifesto and performance lasted only a couple of years, which were enough to build an idea that has been maintained up until today. The *Provo* took charge of revalidation of the public art and sculpture that had been gestating and reinventing themselves. In this way, in this expression, sculpture, public art, and de-academized and de-museified art are mixed with political imprints. Thus, the bicycle has established itself as a symbolic object *per se*: historical, recognizable, singular, democratic, and comprehensible. A type of art that gets involved with the city and

instrumentalizes its discourses, as it materializes its proposals and sentiments, appears. The manifesto, the proclamation, and the symbolic icon converge in the bicycle.

Many of these elements were appropriated and reinterpreted later by the *Ghost Bikes* in the nineties, even though they incorporated death as a determining and radical concept. The *Ghost Bikes* kept the iconic and pregnant[20] symbol of the bicycle painted white (slightly resignifying it) and took the fatality and the occurrence as a new banner of struggle for the new cause using death as a vector of demand and protest slogan and a promoter of consciousness in the society. In this sense, the shift in the discourse was adjusted to the newly available scenarios and positions itself as a more translatable, anonymous, and replicable practice, as well as, less cryptic and authorial than the *Provo*.

So, this practice, which was developed in different societies, landed on national soil in 2012, and, because of its affinities and shared characteristics, was incorporated into the local scenario, juxtaposing itself to the *Animita* that already represented tragic death, but in its generality. In that sense, both rites were juxtaposed shaping a new one, and, also, both rites coexist nourishing each other, cooperating symbiotically in their respective propagations. This practice is experiencing a state of early childhood, where events like the Social Protests of October 18 detonate and accelerate processes, as already happened with the *Animita* in its origins.

In this way, the *Bicianimita* incorporates in its DNA these political and artistic notions that are reconverted and readjusted in the local scenario, turning the *Bicianimita* into a vector and icon of the citizen demands for a better coexistence between cyclists and vehicles, and, for the right to the city. A mutant gene that recodes the popular practice as we have been understanding it, and, that is introduced by the same citizenry that feels the loss and the injustice of reality and a proposal of a city that does not incorporate them. The *Bicianimita*, in its differentiation from the *Animita*, is as much an act of popular religion, as an act of art in public space. The *Bicianimita* is both a cenotaph and a public sculpture that is deacademized and politicized; it is a demonstration and an informal monument; a popular proposal of religion and cult and, at the same time, a manifesto of anarchism and resistance. Hence, the *Bicianimita* is not incorporated into the environment as an *Animita-Bicianimita*, given that, it resembles the *Animita* due to shared and inherited dispositions, but it differs from it since it is an element of complaint and resistance that coincides with the *Animita*, although with the *Provo*, the *White Bicycle* and the *Ghost Bike,* too.

According to this re-interpretation of the *Bicianimita*, it is possible to understand it both as a pile[21] of hybrid and juxtaposed symbols and as singular findings[22] in the city which are incorporated into the scene by rearticulating, catalyzing and vehiculating discourses and sentiments produced by and from subalternity and with great impact (due to its appearance and meaning) on the dynamics and relations of public space, as well as on the ways of its management and appropriation. Consequently, the *Bicianimita* enters the scene as an "informal monument"[23] and counter-monument[24] by adopting the form of a politicized public sculpture, de-academized and originated from the citizenry[25].

In relation to the idea of a counter-monument, and the monumentalization of an event, the art critic Ignacio Sczmulewicz (1986), who theorizes about contemporary art and public sculpture, says that "in this line <commemorative monument> is the most widely used concept, understood as the sculptural production whose purpose is to introduce a political, sculptural and identity message in the city from the classical language"[26]. Although Sczmulewicz refers to a more canonical form of art and how certain informalities, which are more difficult to catalog, storm into the public scene with political messages, the concept can be used to understand the monumentalization that occurs with the *Bicianimita*.

The *Bicianimita*, through this political facet, activates dialogues that promote pilgrimage, devotion, and, also, activism, as it incites people to begin to examine and understand their surroundings. Consequently, and according to the art critic Lucy Lippard (1983) who spoke in 2001 about looking at the place - with the consequent production of dialogue -, the *Bicianimita*, which originates from the complaint (popular inspection) would seek (due to its function) to incite and to demolish the borders imposed by the hegemony, while pursuing recognition of the other, in a fight over liberation and democratization of the public. Hence, when Lippard speaks about the characteristics and importance of public art and recognition of unrecognized art, he states that "Not all the different forms ... that have received the name of 'public art' are worthy of that title. I would define public art as any type of work with free access that worries about, challenges, implies, and takes into consideration the opinion of the public for whom or with whom it has been made, respecting the community and the environment"[27]. This affirmation contributes to the re-interpretation of the *Bicianimita* from its role as a vector of discourses, when it borrows the body and soul of the deceased to install socio-political and "territorial" problems, going beyond the pure individual commemoration of the occurrence like the *Animita* does.

Rethinking the *Bicianimita* from the informal art allows us to understand the shift that the juxtaposition of the bicycle produces in the cenotaph, leading it to a social and political extreme, renaming it as a subordinate art form, with a close relationship with the place, society and a transversal issue as it is the right to occupy public space. In Lippard's words, we could say that this type of art "Like posters in the street, stencil or stickers creations, these works often function as 'art that awakens'"[28]. The action creates conscience and captivates, with the ability, almost rude, to point its finger at injustice and to shout for an answer, where nobody stays indifferent.

In the contemporary city; "walls, enclosures, and facades serve to define both a scene (where something takes place) and an obscene area to which everything that cannot or may not happen in the scene is relegated: whatever is inadmissible, be it malefic or forbidden, thus has its own hidden space on the near or the far side of a frontier" [29]. The philosopher Henri Lefebvre (1901-1991) describes in this way the limits that hegemony builds to ensure the proposal of a world that they impose on the rest. On this logic of division that exists in public space, the place of the unacknowledged, ignominious, and what does not fit[30], is also instituted. In light of this, the *Bicianimita* would be that inadmissible object which, as Ojeda and Torres said, "constitutes the basis of a hidden, informal and devalued city, that, like a codified urban mosaic, has been established in a parallel way to the formal model of our cities, building a collective counter-memory transferred to multiple memorials that interfere with the urban space"[31]. The *Bicianimita* then acts as a monumentalized fact that blurs and overflows the borders that Lefebvre refers to.

All things considered, through the *Bicianimita*, as a subaltern practice and counter-monument, part of a hidden city that puts a strain on the official city are revealed, causing a space of friction between both cities, one formal and exposed and the other informal and underground. The friction is produced not just by the threat represented by the existence of an emerging informal city, but also by the dispute over the city limits, as these *counter-monuments* materialize in public space, as they appropriate the formal spaces of the city to turn them informal and, in some way, private[32]. This form of appropriation of space and construction of a subaltern city reveals, even more, the artistic and political side of the *Bicianimita*.

When the political-artistic side of the *Bicianimita* is disclosed, there is no claim to nullify the characteristic of popular religion that has represented it as a practice linked to the *Animita*, on the contrary, it appears as a radical, parallel complement, external to its condition of religion and devotion, which, to some extent, gets to succeed it. For this reason, it is underlined how through the *Bicianimita* the accident, the event, and even the deceased are instrumentalized, conveying other discourses, not only individual and personal, but also collective and communitarian. This discursive disposition allows to re-interpret the *Bicianimita* no longer as a singularity, but as a "system" of small counter-monuments located in the public space, that, like *the Provos*, raise and articulate general citizen issues about a community that seeks to reconsider ways of building a city where citizens assume a relevant role in its discussion and construction.

In this way, with the monumentalization of the occurrence that originates the *Bicianimita*, the idea of it as a counter-monument appears, as these counter-monuments and popular sanctuaries correspond to informal structures produced by subalternity in an organic way, reappropriating the city at the same time they reveal it and represent it by its essence. The interesting side is how a phenomenon that has been occurring since before art left the academy and occupied the street is mixed with another action that develops from this idea of an art that responds to the phenomena of the city in a political and social way and that is each time more deacademized and unbiased. In some way, the *Animita* can be seen as a proto counter-monument that culminates -and rearrange itself- with the appearance of the *Bicianimita* that assimilates both aspects.

Now, as a city counter-monument, the *Bicianimita* submits to the description that is made of the new public sculpture as a category that enters forcefully into the city, blurring techniques and categories, tangling readings and approaches and challenging authority. In such a way, it is possible to understand how, in the *Bicianimita*, the sanctuary and the sculpture coexist inside a body of multi-vocal characteristics, that represents both versions simultaneously, projecting meanings in parallel and complementarily and detonating activist and sensitive messages, articulating a place of memory and return for family and friends (and devotees) and an image and emblem of alert, injustice, and proclamation of urban and social claims for the pedestrian, the cyclist, and the citizen groups.

Szmulewicz, as well, approaching the topic of counter-monument when he talks about contemporary art forms, also exposes, among other forms of public art, community-based art (or "new genre"), which collects art forms that originate from community participation and outside the museum (and the canon), and that use the city as their stage, backdrop, and supply of meaning and work[33]. This art form, like the *Bicianimita*, adopts and articulates the political discourses of the citizenry, exposing the sensitivity of the inhabitant, in a counterproposal to official and academic art[34], "questioning the concept of the monument"[35] as a device of truth and an instrument of the perpetuation of history. Like

so, Szmulewicz says that current public art "allows building a specific mode of relationship with the city that is not based purely on economic - advertising - or political - signs, architecture and urban planning - goals but more like on the effect of visibility, theoretical, historical and semiotic output that the visual construction of the city can have."[36]. Articulating the way in which these "iconic artifacts"[37] start to play an urban role, shifting them towards a territorial and urban sphere, as we said before, no longer purely singular and of popular religion, but of transcription of the pulse and identity of the city, establishing infinite dialogues with the city and with its ability to update and review.

In light of the above, the *Bicianimita*, as an iconic artifact[38], is incorporated making more complex the "bestiary" and landscape of counter-monuments erected by the community in the city, by adopting (or sharing) the ways in which *Community-based art* is established, which, additionally, reveals the problems of the city, and at the same time materializes the thoughts of the citizens, and that distinguishes it from the *Animita* by impacting in another way on the problems of the city and a more transversal population. Szmulewicz, in this way, addresses how these (new) forms of public art are able to "transform the perception of the city ...transform the way of inhabiting it ...and, of course, criticize the way the city is being built"[39], uncovering the (true) city as it is appropriated by the different interventions that originate from the citizenry (from the counterculture and subalternity).

For this reason, when the link with the arguments of Lippard and Szmulewicz is proposed, it is possible to deepen, to compose, and to articulate what previously Ojeda and González have constructed (regarding the *Animita* and the *Bicianimita*) by showing how this new unexplored artistic and political edge acts, allowing to reach a more complete understanding on the influences of the *Bicianimita* with its ability of appropriation of the city and the new dialogues and messages that take place.

For the above-mentioned reasons, it is suggested to re-understand the *Bicianimita*, besides as a variant of *Animita* (as Gonzalez formulates), as a proposal of expanded art and counter-monument, to the extent that this variant fits into the development of a concept of public art that since the sixties has put its efforts in the street, raising citizen discourses and articulating their claims (first from activism and then from politics) in a polemical, unprejudiced and anonymous way. Because of that, since the 2000s, and especially in the last decade, it has established itself as a counter-proposal that the city has raised against the hegemonic discourse that the elite has accumulated.

In other words, by examining the reach that the *Bicianimita* has in the city, as much as the practice of popular religion, as a blurred form of public art, it is possible to understand the way the *Bicianimita* acts when it appropriates the public space and re-politicizes the city: it acts as a counter-monument. Following what the North American art critic Douglas Crimp outlined public sculpture: "it can be stated that public sculpture has reached an unprecedented level of success. This success consists in the redefinition of the place of the artwork as a place of political struggle" [40]. that leads us to re-understand that when the *Bicianimita* occupies and appropriates the city, what it finally does is to reveal its condition of contested political space, joining this scenario as an actor that plays multiple roles in different layers of interaction and that mainly possesses the ability to articulate voices and discourses of a citizenry that demands to be heard and expects to recover the livability and to reconsider the form of government and the construction of the city.

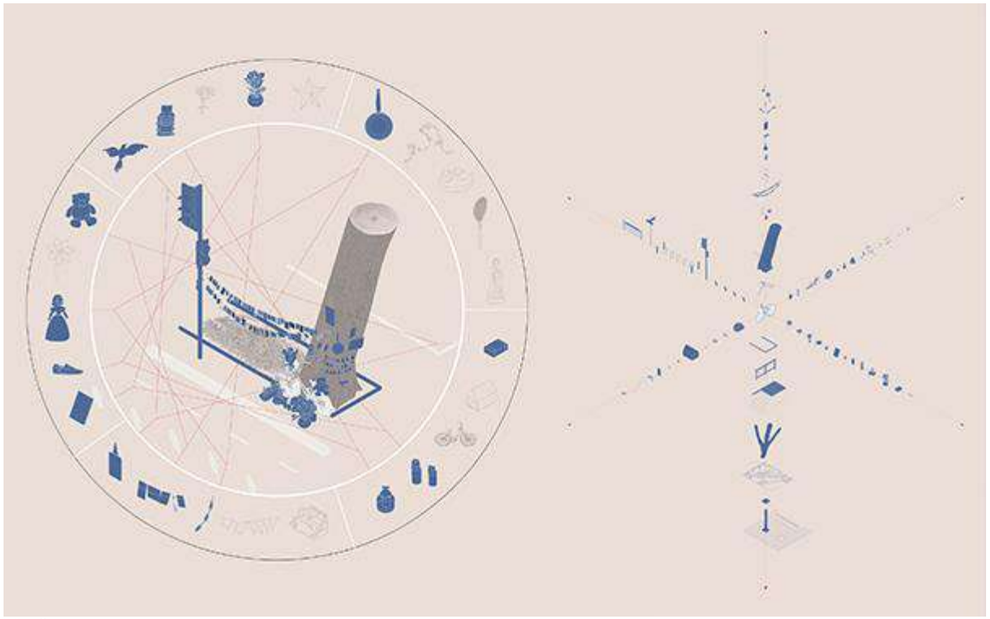


Fig. 3

Conclusions

The *Bicianimita*, appears on the scene in 2012 after the death of the cyclist Arturo Aguilera, when, on the occasion of his commemoration, the link between the *White Bicycle* and the *Animita* is made. This relationship connects, in a juxtaposition of symbolic images, a popular practice with religious characteristics with a civic practice with political characteristics through a process of synthesis that leads to a new form of popular production that has slow begun to gain more autonomy with respect to its predecessors. This situation complicates the map of actors both in the *Animita* and in popular interventions in the contemporary Latin American city, with structures that link the civic and the religious depending on transformations and hybrids of popular and citizen practices. This synthesis is evident in the *Bicianimita* as a tremendously complex and multifaceted actor with respect to its predecessor in Chile.

Consequently, the *Bicianimita* appears as an alternative and underground form of community public art in the city, with a multifaceted characteristic incorporated in its structure that allows it to impact the city in an active and sensitive way, acting through the activation of different citizen layers in favor of specific and collective causes, such as the memory of a dead person and the complaint about the safety of cyclists in the public streets, representing and materializing, not only the absence of the deceased that a circle of acquaintances experience, but also the popular feeling of a community that demands to occupy and inhabit the city with legitimacy, as well as reporting the unfair situations that take place in it. Hence, the idea that the *Bicianimita* acts as a counter-monument - a category that takes distance from the *Animita* - derives not only from the contemporaneity and validity of the discourses that begin to be articulated but also from the very ability to question the way the city is built and to represent the feelings of neglected communities.

In conclusion, the *Bicianimita* is both a form of *Animita* and the result of all its components and derivatives that act through its form. Its value lies in embracing the different types of messages that appear, and allowing them to happen in parallel and complementarily. This characteristic shifts it from the assessment that currently it gets as a form of popular religion and places it in the form of a public art intervention that acts as a system by appropriating spaces in the city, articulated by the religious and popular and by the current socio-political discourses.

Notes

1 Byung-Chul Han, *Shanzai* (Buenos Aires: Caja Negra Editora, 2017), 23. Quote translated by the author.
2 A citizen group that originated to defend the rights of cyclists and to denounce the lack of regulation in the coexistence between cyclists and motorists on the public road. This group is the first to place a White Bicycle on an *Animita* to commemorate a cyclist who died as a result of a traffic accident.
3 This practice has not been developed predominantly by the academy as much as it was in the case of the *Animita*, both in Chile and abroad, and by researchers from different disciplines. In 2017, the historian Macarena González presented at the University Alberto Hurtado the Master's Thesis: *Bicianimitas. Un análisis desde el giro icónico*. inaugurating the academic investigation on the *Bicianimita*.
4 A concept whose origin is found in the research of the Mexican Pablo Escalante (1963) and that relates the "fusion" of two practices and symbolic, active and current objects in their different contexts of origin that are reconceptualized in this new form and was based on the new particularities that emerge from this mixture.
5 Those that link the processes of social upheaval with the emergence of popular practices of cult of the dead in Latin America (Ojeda y Torres, Animitas: Deseos cristalizados de un duelo inacabado 2011).
6 The book recounts about popular saints who had their peak at the time when civil wars (Argentina and Brazil), executions, and deaths by accidents or murders of public figures and linked to crime, resistance or in general to the people took place. Thus, stories are told about Manuel Rodríguez, José Manuel Balmaceda, Emile Dubois, Serafín Rodríguez, Deolinda Correa, and Jorge del Carmen Valenzuela Torres.
7 Lautaro Ojeda y Miguel Torres, *Animitas: Deseos cristalizados de un duelo inacabado* (Santiago: LOM Editores / Consejo Nacional de la Cultura y las Artes, Fondo Nacional de Desarrollo Cultural y las Artes, 2011), 20. Quote translated by the author.
8 According to the concept elaborated by Peter Burke, see *La cultura popular en la Europa moderna*.
9 Category where Serafín Rodríguez and Emile Dubois appear, according to Ojeda y Torres.
10 Lautaro Ojeda y Miguel Torres, *Animitas: Deseos cristalizados de un duelo inacabado* (Santiago: LOM Editores / Consejo Nacional de la Cultura y las Artes, Fondo Nacional de Desarrollo Cultural y las Artes, 2011), 21. Quote translated by the author.
11 Lautaro Ojeda y Miguel Torres, *Animitas: Deseos cristalizados de un duelo inacabado* (Santiago: LOM Editores / Consejo Nacional de la Cultura y las Artes, Fondo Nacional de Desarrollo Cultural y las Artes, 2011), 21.
12 Especially those popular characters who die "defending the people", as Manuel Rodriguez and Jose Manuel Balmaceda are addressed.
13 The cases of the "Difunta Correa" (whose death was between 1820 and 1858 while a civil war was taking place in Argentina) and the "Gauchito Gil" (executed in 1878) stand out; and the Chileans Manuel Rodríguez Erdoíza (shot in 1818), President José Manuel Balmaceda (who committed suicide in 1891), Serafín Rodríguez (shot in 1906) and Emile Dubois (shot in 1907) (Ojeda y Torres, Animitas: Deseos cristalizados de un duelo inacabado 2011, 19-20).
14 The activity that the North American photographer Spencer Tunnick conducted in Chile, provoked a strong commotion and a discussion that raised the problem of modesty and the body at the same time that multiple taboos and complexes that the Chilean society was carrying after dictatorship began to be unleashed.
15 As it was called the national demonstration carried out by Chilean students who demanded free and quality education, a situation that provoked readjustments in the political scene and the first direct criticism from the citizens towards the economic, educational, and proposal model of the country reflected in the political constitution.
16 On October 18, 2019, as a result of a demonstration that took place due to the increase in the price of Metro tickets, a massive and popular social upheaval took place complaining about a series of injustices and mistreatments accumulated over time produced by the country's elites against the people in general. The social outburst occurred in the city of Santiago de Chile, but quickly expanded to cover almost the entire country. This event originated a citizen debate and led to the holding of a plebiscite to evaluate a change in the country's Constitution.
17 Operation that is observed so as much in the studies of Lautaro Ojeda as in those of Macarena González.
18 Unlike the *Animita* that is built "in" the space, localizing it.
19 These aspirations and claims are mostly caused and motivated as a result of memory and the confusion caused by the loss of the local ecology, together with the traditions and rites (roots) that define us. In this sense, the art critic Lucy Lippard reports on the themes of the demonstrations today, when she says that "... the "ecological" crisis is largely responsible for the actual concern for place and context, but so is the nostalgia caused by the loss of roots". (Lippard 2001, 52), which greatly reflects the concern behind the *Animita* and the *Bicianimita*, in the face of the advance of urban development and the hegemonic proposal of life. Who also remarks that "The Greek root of the word 'ecology' means home" (Lippard 2001, 52). Lippard's perspective is very contingent; in her text, she refers to the disconnection and little empathy of the governing class with the loss or feeling of lack of roots regarding the place they rule, nullifying the recognition of the other in the act.
20 The brand, or brand image.
21 In the sense that Smiljan Radic articulates the concept of piling up (apelotonamiento) in his article *Frágil Fortuna* (Radić 2014).
22 Findings, according to the concept of "*As Found*" proposed by the Smithson's (Lo ordinario 2010).
23 In the same way that Ojeda explains the *Animita*.
24 The concept of the counter-monument is addressed by Ignacio Szmulewicz in his book *Fuera del cubo blanco*. Readings on contemporary public art, in which he develops the idea of public art and variants such as *Community-based art* that involves the concept of counter-monument.
25 To remember, to commemorate, to represent, also to polemicize and annoy.
26 Ignacio Szmulewicz, *Fuera del cubo blanco. Lecturas sobre arte contemporáneo* (Santiago de Chile: Ediciones / Metales Pesados, 2012), 21. Quote translated by the author.
27 Lucy Lippard, "*Mirando Alrededor, dónde estamos y dónde podríamos estar"* in *Modos de hacer. Arte crítico, esfera pública y acción directa* by Paloma Blanco, Jesús Carrillo, Jordi Claramonte & Marcelo Expósito. (Salamanca: Ediciones Universidad de Salamanca, 2001), 61. Quote translated by the author.
28 Lucy Lippard, "*Mirando Alrededor, dónde estamos y dónde podríamos estar"* in *Modos de hacer. Arte crítico, esfera pública y acción directa* by Paloma Blanco, Jesús Carrillo, Jordi Claramonte & Marcelo Expósito. (Salamanca: Ediciones Universidad de Salamanca, 2001), 62. Quote translated by the author.
29 Henri Lefebvre, *La producción del espacio* (Madrid: Capitán Swing, 2013), 95. Quote translated by the author.
30 Where lies the point discussed in chapter Panorama and where are located "almost" all these manifestations that originate from subalternity with a physical presence in public space are located.
31 Lautaro Ojeda y Miguel Torres, "*Territorios de la memoria desobediente"* in *Márgenes: Espacio, Arte y Sociedad* (Valparaiso: Universidad de Valparaiso, Facultad de Arquitectura, 2012), 60. Quote translated by the author.
32 To the extent that these spaces by being appropriated by the community through the construction of these cenotaphs acquire an owner when they are marked with the soul of the deceased to whom these memorials are dedicated.
33 In the sense of empowering "the city as content, not material to be represented" (Szmulewicz 2012, 11).
34 Ignacio Szmulewicz clarifies how public art shifts from the activism of the 60s - 70s to the political, aesthetic and community activism of the 80s - 90s (Szmulewicz 2012, 23).

35 Ignacio Szmulewicz, *Fuera del cubo blanco. Lecturas sobre arte contemporáneo* (Santiago de Chile: Ediciones / Metales Pesados, 2012), 32. Quote translated by the author.
36 Ignacio Szmulewicz, *Fuera del cubo blanco. Lecturas sobre arte contemporáneo* (Santiago de Chile: Ediciones / Metales Pesados, 2012), 10. Quote translated by the author.
37 Macarena González, *Bicianimitas: Un análisis desde el giro icónico* (Master diss., Universidad Alberto Hurtado, Santiago, 2017). Quote translated by the author.
38 Category assigned by Macarena González in her Magisterial Thesis (González, Bicianimitas: Un análisis desde el giro icónico 2017).
39 Ignacio Szmulewicz, *Fuera del cubo blanco. Lecturas sobre arte contemporáneo* (Santiago de Chile: Ediciones / Metales Pesados, 2012), 33. Quote translated by the author.
40 Douglas Crimp, *Posiciones críticas. Ensayos sobre políticas de arte y la identidad, Vol. 16* (Madrid: Ediciones Akal / Arte contemporáneo, 2005), 96. Quote translated by the author.

Image Captions
Fig. 1. Left: Sample picture of an *Animita.* Author: @animitas_cl. Right: Sample picture of a *Bicianimita.* Author: León Duval.
Fig. 2. Left: Sample picture of Bicianimita´s denunciation massages. Author: #ciclistasconalas. Right: A denunciation message of Arturo Aguilera´s Bicianimita. Author: #bicianimitas.
Fig. 3. Left: Illustration of María Ignacia Romero´s Bicianimita. Right: Illustration of the relationship that makes up the Bicianimita. Author: León Duval.

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Biography
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The architect's book as self-promotion and self-production:
contrasting Rem Koolhaas' S, M, L, XL, and Bjarke Ingels' Yes is More

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Abstract

This paper addresses specificities of the production of monographs by famous architects since the final years of the twentieth century. For architects, both the rise to notoriety and the construction of a professional *ethos* have been historically connected to their engagement in self-publication in treatises, monographs, magazines, and manifestoes. The printed book remains paramount to architectural fame-seeking and self-definition, but the terms of its relevance mutated with historical transformations in both architecture and book design. This text argues that, in the burgeoning cultural hegemony of design-as-branding, monographs have been more frequently treated as manifestoes, and their design has been frequently used not only to convey but to produce the professional image of their respective offices.

To examine that question, this paper compares two contrasting cases of manifesto-like monographs: Rem Koolhaas' *S,M,L,XL* (1995) and Bjarke Ingels' *Yes is More* (2009), observing characteristics of their respective historical backgrounds, production contexts, design features, and professional discourses.

Despite the clear asymmetry in length, depth and style, there are some key characteristics that can be found in both cases: the emphasis towards the "backstage" of the architectural profession and the impact of "otherness" (clients, institutions, law, economy) in architecture; the performative play between image, text and book design; or the dialogue with graphic designers in the process of conception and production of each book. Nevertheless, the analysis also reveals that those features are manifested very differently in each case.

The paper states that, though both books certainly served their respective offices as means of self-promotion, *S,M,L,XL* had an exploratory use of design, more open to express the otherness and dissonance inside its own "persona", and to treat the book as architecture; and *Yes is More* is more committed to cohesive devices such as the narrative plot, conveying a well-defined identity and being a more direct product of a design-as-branding framework.

Keywords: architecture monographs, book design, Rem Koolhaas, Bjarke Ingels.

1. Introduction

Mediatization is a foundational aspect of architecture. Although rooted in the physical world, in technology, and the idea of material *presence*, architectural design is also a very symbolic and deeply representational practice, with many intangible concerns. Many architects' commitments, ideas, and inputs are hardly visible in the finished built environment, requiring graphic and textual representations to be conceived, registered, and communicated. Nevertheless, the construction of a public, collectively shared notion of what *is* architecture relays heavily not only in pictures and words but also on the tools available for the reproduction and circulation of those pictures and words — in other words, in mass media.

As modern societies became increasingly and ubiquitously permeated by media through the twentieth century, the awareness of that condition grew both in professional practice and in the field of academic research. Mario Carpo, among others, reminds us that the achievement of printing was conditional to the modern rise of architecture as an internationalized, intellectualized, and image-driven discipline of designing, instead of just an empiricist praxis of construction[1]. Since the Renaissance, architects have been directly involved with treatises, monographs, magazines, and manifestoes for aims of education, public debate, or self-promotion, and those efforts are inextricably fused with the permanent construction of the architectural discipline. As highlighted by Beatriz Colomina, modern architecture of the Twentieth Century became modern precisely through its engagement to mass-media; some architects — Le Corbusier being the clearest example — held writing and publishing as a key field of architectural production, parallel to the design desktop and the construction site[2].

That condition and its precedents have to be kept in mind especially when we consider the discursive practices of architects aspiring influence or fame. From Vitruvius to Palladio to Le Corbusier to Rem Koolhaas, the achievement of a larger reputation (practical, theoretical or both) has been closely related to the architect's engagement to publishing; the recent phenomenon of international "starchitecture" is especially unthinkable without skillful and reiterate involvement with mass media. That said, one can ask: considering the many ways in which famous contemporary architects present their works and ideas to the public, what is the rhetorical function of the *shape* given to the media they are using to communicate? Which are the possible relations between architectural discourse and the design of its medium?

The printed monograph is an interesting object to examine that question. Even in our highly wired times of digital hypermedia, the physical book remains culturally invested with an aura of permanence and intellectual importance, making it a desirable asset in an architect's pursuit of public reputation. The last decades witnessed a growing interest of some major studios (as well as minor ones aspiring to grow) in the production of books.

Being both an instrument of self-construction and a rhetorical tool of persuasion, the appearance and performance of the architectural book have long been a concern for architects. There are plenty of historical precedents for communicative and aesthetic experimentation with the codex format; but as public awareness of graphic design grew in the last decades[3], designers and architects progressively come to invest more frequently in visual and objectual uniqueness and expressiveness of their monographs. That investment, in its turn, is also linked to a broader phenomenon that pervaded our professional, material, and visual cultures in the last decades: the progressive generalization of concepts and techniques of branding.

Monographs organized and written by scholars, journalists, or specialized publishers are a precious element for building public legitimation; but books written and organized by architects themselves can aspire to be considered also *a part* of their work. If buildings and designs carry the "signature" of architects, books carry their distinctive voice and *ethos*, and therefore can contribute to build, reinforce or announce an office's brand. At that point, investment in book design becomes more strategical to architects seeking fame: treated itself as a product of design, with its author's discourse distinctively expressed and amplificated by visual communication, the artifact "book" can work better as a bibliographic *synecdoche* of an office's character: a fragment or sample that aims to speak for the whole, building synergy between work and discourse and summarizing a professional approach.

This paper examines this subject by comparing the most notorious monograph of two globally famed "starchitects": *S,M,L,XL* (*Small, Medium, Large, Extra Large*), from Dutch architect Rem Koolhaas and his Office for Metropolitan Architecture (OMA); and *Yes is More: an archicomic on architectural evolution,* from Danish architect Bjarke Ingels and his Bjarke Ingels Group (BIG).

2. Two of a kind: S,M,L,XL and Yes is More

The duo of books here selected for scrutiny have wide differences in terms of context, style, length, depth, intricacy, refinement and disciplinary relevance. Nevertheless, they can also be understood as different moments within an architectural "lineage", sharing some fundamental similarities (fig 1). *S,M,L,XL* (1995), and *Yes is More* (2009) were both the first self-organized monograph of their respective practices. As books, both achieved international commercial success (although in different scales), and both were relevant for their office's rise to stardom. More important, the popularity and allure of those two books are inseparable from their use of design and graphic language in a primarily performative way; in both cases, form was treated as content, and the book artifact was conceived to express aspects of each studio's character.

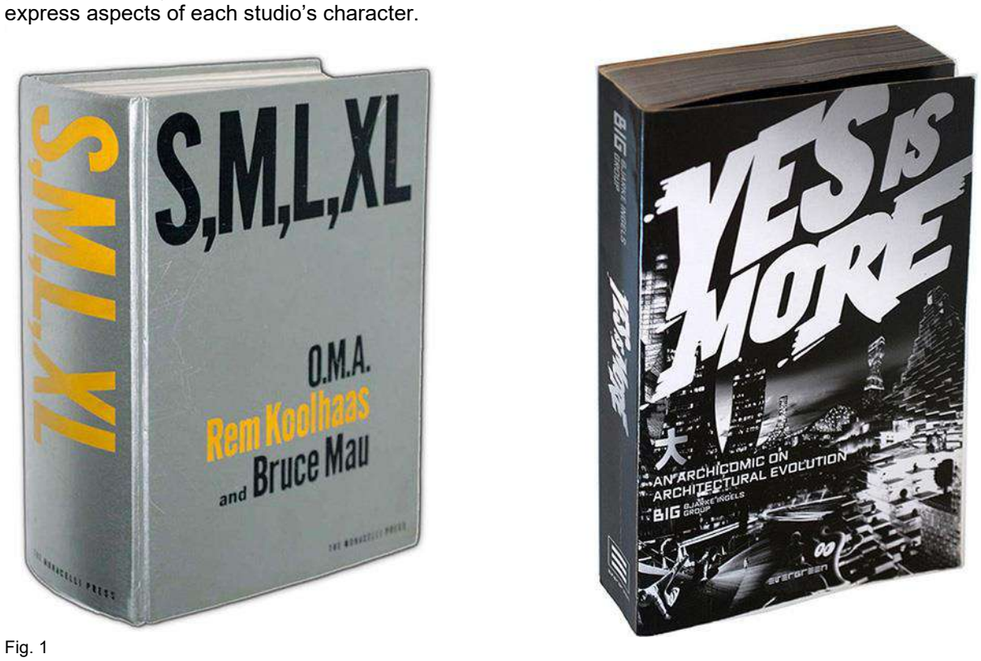


Fig. 1

Those convergencies are not merely accidental, for in many ways *Yes is More* is part of *S,M,L,XL*'s "offspring". With more than 140.000 sold copies in twenty-five years, OMA's first monograph is one of the best-selling books in the history of architectural publishing to this day — which is curious, considering how expensive, specific, and hard to handle it is as a book. The commercial and cultural success of OMA's mammoth monograph encouraged more architecture studios to invest in publishing; and, being also a pioneer at giving front-cover credits of co-authorship to Canadian designer Bruce Mau, the book contributed to intensify awareness about graphic design within the architectural culture.

More specifically, the impact of *S,M,L,XL* inspired and boosted the multiplication of a particular profile of architectural book since the mid-nineties: volumes organized by architects or studios themselves that, despite being a display of their *oeuvre* and ideas to a broad public audience, overtly aimed to be visually and rhetorically distinguished from the average glossy portfolio-like monograph. Like *S,M,L,XL*, those publications usually have been inclined to overlap the retrospective functions of monographs with the prospective and controversial tones of *manifestoes*, operating not only as a looking-back recollection but as a future-oriented statement about the architectural discipline. Regardless of not being the first case to fuse monograph and manifesto, OMA's book was the first one to be sufficiently successful to encourage a strain of other graphically provocative volumes like MVRDV's *FARMAX* (1998), UNStudio's *Move* (1999), FOA's *Phylogenesis* (2003), Studio Gang's *Reveal* (2011), WORKac's *We'll Get There When We Cross That Bridge* (2017) and, of course, BIG's *Yes is More*.

However, *S,M,L,XL*'s influence goes beyond the publishing context, for many of the monograph-as-manifesto practitioners cited above were former workers at OMA and were more directly influenced in terms of perspective on architecture, society, design approach and media engagement. That's the case of Bjarke Ingels, who worked at OMA between 1998 and 2001. But before that, *S,M,L,XL* had already helped to make Koolhaas "part of the canon of the discipline" to Ingel's generation[4]. It is also relevant to remember that the making of the book helped to rethink and reconstruct OMA's identity, as Koolhaas himself stated[5]; and it was precisely in the post-*S,M,L,XL* version of OMA that Ingels started his professional career. In short, there's little doubt that *Yes is More* would not exist without *S,M,L,XL*.

Aside from convergences and affinities, many of the contextual differences between each case must be at least partly mentioned, though not examined here. OMA's monograph, for instance, was conceived under the final moments of the hegemony of print media, at the dawn of global informatization just before the launching of the commercial internet. Before the book, Koolhaas' practice had already developed considerable expertise with visually experimental architectural presentations on its office "booklets"[6]. The production of *S,M,L,XL* took years of collaborative process with other actors outside the office, and the input of a graphic design studio then was one of craftwork and creative co-authorship.

Contrastingly, *Yes is More* was integrally made in the “web 2.0” age of naturalized global connectivity and digital reading. Before its making, the studio already managed a creatively personalized website (www.big.dk) and had a well-defined and distinctive style of presentations, all publicized on internet as slideshows, videos, and filmed lectures. Finally, BIG’s monograph was made in a short sprint of intense work made almost solely within the office itself.
All considered some key convergences and disparities between the selected publications will be examined hereinafter[7]. Regarding the rhetorical role of design, this paper will limit itself to the differences in general attributes; the role of media materiality; the way persona and authorship are displayed; and some ways in which the design of each book relates to the office’s speech and architecture. Due to length limitations, many aspects of each office’s book, architecture, and speech will not be addressed here, but the factors to be shown are significant enough.

2.1. Outside/inside: general attributes

The most immediately remarkable aspect of *S,M,L,XL’s* design is its sheer bulk and weight (1380 pages, 7 cm thick, 2,7 kilograms). Resembling the bibliographic “monumentality” culturally associated with sacred books, OMA’s monograph forms a stiff and dense “block of information”[8] enveloped in a cryptic and purely typographic silver hardcover. The reading experience is bodily demanding: the mass discourages casual handling and carrying, obligating the users to stand still and lean the book against some steady surface. An unadvised reader would recognize it as a book about architecture only after reading the text on the back cover or after spending some time flicking through the pages. The plain and cohesive exterior, on the other hand, is in deep contrast with its strikingly varied and picture-flooded interior (fig. 2).
The book is divided into fifty-three individual “episodes” that include essays, narratives, manifestoes, and, first and foremost, presentations of built and unbuilt designs. Most of those are independent, but some connect with neighboring episodes. Each episode has its distinctive design and can be remarkably different in many aspects — iconography, typography, layout, pacing, color printing processes, and image-text dynamics — making the book a sum of singularities. Cohesive graphic elements are few: only numbering, size, paper type, and the two main typography families remain unchanged throughout (almost) the whole book; and another subtle factor of stability is the treatment given to photographs of OMA’s buildings, which were almost all made by the same photographer (Hans Werlemann).



Fig. 2

A macro-structure of six sections helps to ordinate the chaotic flux of episodes, grouping them by scale: the respective “Small”, “Medium”, “Large” and “Extra-Large” segments that give the book its title, plus the initial section called “Foreplay” and the last section called “P.S.”. Inside each section, design presentations of the respective scale are sequenced chronologically.
The book includes a cross-sectional structure called “Dictionary” (Fig. 3): an independent stream of seemingly uncredited[9] verbal and iconographic quotations that do not occupy a section of its own but

runs parallel through the book and sporadically "invade" the pages of episodes and sections, interfering, interrupting and even giving new meanings to other contents of the book by sheer juxtaposition. Those “outer insertions” happens in three varieties: the “alphabet”, a glossary-like column of text entries, going from “Abolish” (xviii) to “Zoom ratio” (302); the “art images”, small pictures of works of art; and the “world images”, reproductions of journalistic or commercial pictures and pages that occupy entire spreads. The effect of the Dictionary is often disrupting, but in the long run, it becomes a main element of congruence in the book.



Fig. 3

In comparison, *Yes is More* is a simpler and much less “physical” book, offering the first impression of a thick magazine or graphic novel (its size of 25 x 16,3 cm is similar to standard USA comic books). Distancing itself from the monumentality to embrace more casual and jovial moods, Bjarke Ingels had chosen the ambivalent “bookazine”[10] style. Although far from light-weighted (400 pages and over 1 kilogram), it is not big, rigid, or hefty enough to constrain the user; one can imagine it being carried and read on a trip. Unlike the tactile abstract envelope of OMA’s monograph, *YIM*’s high-contrasted black-and-white cover displays architecture immersed in a mood of exaggerated intensity, resembling the cover of an adventure or sci-fi *pulp*, or an homage to Frank Miller’s *Sin City* (one of Ingels’ favorite comics). Also, unlike *S,M,L,XL*, much of the tone of the cover is extended in the books’ interior, which is almost entirely composed in comic book form.



Fig. 4

Structured in a simple manner, *YIM*'s interior has only three parts: its "manifesto" introduction, constructed in a slide-show manner that sets the tone and summarizes the studio's concerns and the book subjects; the long, main section with thirty-five design presentations; and a short compilation of extras. Like *S,M,L,XL*, the presentations of the main section work separately as independent episodes, some relating to others, some not; but there are no broader logic grouping them, not even chronological, and there are no other kinds of content in that section — only BIG's projects.

Much differently *from S,M,L,XL*, every design presentation of *YIM* was modulated similarly, both textually and graphically. Each one is displayed as a narrative lecture being given by Bjarke Ingels himself, but composed within the conventions of comic book language. Although called "cartoon" at the back cover, *YIM*'s comics are not drawn but *assembled* from previously made pictures, especially photographs; it is thus visually closer to a photo-novel, a genre of graphic narrative with even more melodramatic, derivative, and "cheap" connotations than comics.

2.2. Materiality and genre

S,M,L,XL's design was keenly concerned with medium physicality. As Bruce Mau stated, the book was conceived as an *experience*[11], which was not to happen "in the surface" of the page, but between pages — "in the thickness" of the book[12]. Cinema was a key reference for both architect and graphic designer, and most of *S,M,L,XL*'s spreads were treated each as a "freeze-frame", converting the turning of pages into a cinematic mechanism of montage, shocks, flows, and pauses. As a result of that *parti*, some design presentations acquired a very extended "duration", accumulating many more pages than an average monograph would, even a lavishly illustrated one. The general structure of the book (the sectioning by scale, the dictionary, etc.) were already outlined in 1989, but the effort to produce an individualized experience for each project and text dominated the following years of work of Rem Koolhaas and Mau's studio[13].

Conversely, *Yes is more* was not driven by the idea of the book as an artifact to be experienced. Although the usage of bookazine and comics format was deliberate, it was more concerned with instant visual symbolism. Whereas *S,M,L,XL* could not possibly be made into an e-book without losing many of its core qualities, the comic strip pages of *YIM* could be and *were* transferred to tablet screen and exposition panels without losing any of its defining aspects. Since *YIM* was elaborated from the beginning as both book and museum exhibition, this versatility was part of its conception[14]; the design *parti* of the book was in the genre, not the physical object.

Ingels' recourse to comics was substantially pragmatic: according to Mélanie van der Hoorn, Ingels' original idea was to translate already-made lectures and design presentations to book form; after disappointing results and with a very little time remaining, comics arrived as a quick and efficient way to achieve an eye-catching differentiator without having to overthink the *design* of the book ("you don't really worry about what it looks like, because it just looks like a comic book"[15]), allowing Ingels to make a four hundred paged volume in six weeks with just two architects and four students[16].

Those disparities in production resulted in visible differences between the books. Despite including several lower-quality pictures, *S,M,L,XL* has an overall high-end graphic workmanship. By contrast,

Yes is More is less than well-finished, sometimes is even amateurish; some parts are too dense and loaded (it is noteworthy that it presents the same number of projects of *S,M,L,XL* with less than a third of its pages). In any case, detailing shortcomings are partly mitigated by the bookazine/photo-novel/cartoonish tone, which tacitly embraces some cheesiness as a principle. Also, BIG's rushed editorial option offered some commercial compensations, lower pricing being not the least of them. It's significant, for instance, that after twenty-five years *S,M,L,XL* remained exclusively available in the English language, while in ten years *YIM* had been translate to many others. The organicity of the multiple image-text interplays made OMA's book difficult for translation, for changes in text length could demand laborious changes in the original design. Conversely, the partition of text in captions and speech bubbles allows *YIM* to be translated with little efforts of layout adaptation.

2.3. Ethos and Others

Besides showcasing ideas and projects, both *S,M,L,XL,* and *Yes is More* openly claim to capture the life force of their studios, uncovering behind-the-scene processes, dialogues, challenges, and defeats of the architect's profession. Doing so, they both distinctively perform narrativizations of design *praxis* that underline their studio's engagement with forces of a broader world of culture, economy, policy, and media beyond more traditional and singularly "architectural" subjects (like form, space, program, and building technology).

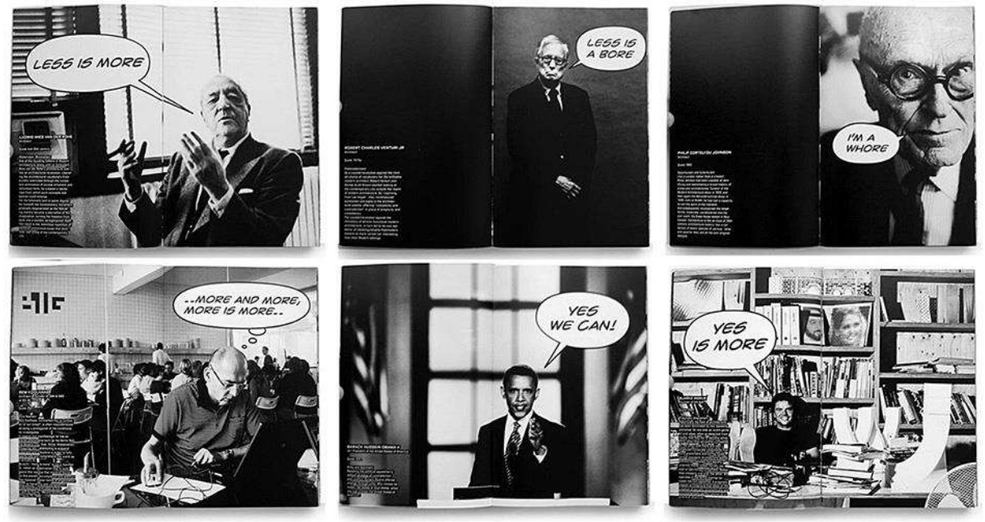


Fig. 5

Yes is More is mostly straightforward in terms of self-definition, being a very literal case of monograph-as-manifesto. It declares itself as a "manifesto of popular culture" in its back cover, and at its first pages frames a recognizable set of BIG's principles (fig. 5), demands, and slogans to repeatedly defend and apply. Almost completely dedicated to showcasing the office's works, it underscores and exemplifies the "manifesto" tenets through storytelling and witty puns within design presentations. Some episodes are framed like a farce-like but adventurous quest of the protagonist/architect, the narrative climax being the overcoming of challenges — like the achievement of a design solution or the winning of a competition.

Though also very narrative, *S,M,L,XL* displays a more ambiguous and protean profile. Koolhaas starts the book postulating that coherence in the career of architects is "either cosmetic or product of self-censorship"[17]; fittingly, *S,M,L,XL,* embraces the mere accumulation of different modes of speech — essays, manifestoes, narratives, project presentations — without bothering to provide an easily recognizable thread or style. Koolhaas' aphoristic verve reinserts and reinforces OMA's professional concerns through the book's narratives and reflections, but it still works less as a prescriptive call to action than as an open, exploratory provocation.

More than a portrayal, the two books aim to enact a close encounter with each office, albeit in very different terms. *YIM* is quite figurative in that matter, literally treating the reader as a visiting guest being lectured by Ingels at BIG's headquarters[18]. *S,M,L,XL*, in contrast, does that by including and superimposing "raw" evidence of working process, like apparently spontaneous messy photos — of the office facilities, Koolhaas' meetings, employees working, construction sites —, rough sketches or scrawled plans of preliminary versions of a project. BIG's self-displaying in *YIM* is thus blatantly controlled and mediated as storytelling, but it is hard to tell if OMA's "highbrow" montage-like expression of honesty is anyway less staged.

Both monographs underline the collectivity of the design process (the pronoun is almost always “we”) but ends up centered on the individual figure of the leading architect/writer. BIG’s book is particularly extreme in that matter: as the sole *cicerone* of *YIM*, Bjarke Ingels is conspicuously dominant as both narrator and character. The book refers to the architect as merely a “midwife” for the human environment, which is actually shaped by societal collective forces; but every input from the world’s otherness that appears through *YIM* is filtered by Ingels’ tightly controlled narrative. At the same time, despite its *ego trip* aspects, *S,M,L,XL* is more subtle in terms of author presence and its relation to plurality. In comparison to average monographs, it displays more depictions of the chief architect than usual; but it happens more sporadically than *YIM*, and the book visibly seeks to directly *incorporate* plurality through design features like the “Dictionary”. While Ingels’ presentations in *YIM* continuously reinforces his comic strip avatar, Koolhaas’ own “voice” does not sound the same throughout the whole book.

2.4. Form and self-performance

Despite the differences in the way the design of each book deals with medium materiality and the studio’s identity, both cases relate to a form-as-content attitude, and their respective conceptions are loaded with a performative take on design that conspicuously binds the “functioning” of the book with the attitude of the office.

The structure and “experience” designed in *S,M,L,XL* are oriented to the incorporation of the *metropolitan* qualities that OMA allegedly explore and nurture in its proposals. Some of the key subjects of Koolhaas’ text in the book — as bigness, density, complexity, randomness, juxtaposition, superimposition — seem to apply not only to architecture but to the book itself. One of the key aspects of OMA’s attitude is the programmatic harnessing of the metropolitan condition of *congestion*, which requires an openness to random chance brought by simple and accidental proximity to otherness. That particular aspect is mainly performed in the book by the “Dictionary” and its “collisions” within each episode’s narrative. However, the most overt incorporation is that of Koolhaas famous consideration on *Bigness*. He postulates that, when a certain “critical mass” is reached, the sheer size of a building leads to effects like:

– the instant acquisition of a blank monumentality, mostly indifferent to qualitative or symbolic matters;
– the divorce between exterior and interior, making the outer “envelope” the main element of (artificial) cohesion;
– the individualization of the building’s inner parts as autonomous projects[19].

Those effects are promptly enacted by *S,M,L,XL*’s structure, which, as “bigness” itself, organize both “independence and interdependence” of parts “within the larger entity in a symbiosis that exacerbates rather than compromises specificity”[20].

The idea of performance is also central to BIG’s conception of *Yes is More*, but it duels mostly on the comic strip language. Even though the book was not conceived as an architecture-like artifact, it is important to note that, as *S,M,L,XL*, it does incorporate important features of its studio’s architectural attitude. Along with the many presentations on *YIM*, there are at least three aspects that seem to legitimate practically all design decisions:

– a buildings’ appearance is never justified in mainly conceptual or aesthetic terms, but always on basis of its constructive, programmatic, climatic, ecological, or economic functioning;
– the conflicting practical demands of a project are better solved with “simple lines and clear ideas”[21] — so the form must be easy to synthesize in one bold gesture or visual metaphor (as a logotype);
– the form must be *entertaining, relatable, and accessible* — physically, socially, intellectually, symbolically — to the lay audience.

Those features — let’s call them *performativity*, *iconicity,* and *accessibility* — are closely related to Ingel’s preference for the comic strip. It is a *form* option that, rooted in practical reasons, clearly affects the *performance* of the book; it is *iconic* — plain, recognizable, and boldly distinctive; and it is *accessible* — readable, relatable, and entertaining even for people with modest architectural knowledge.

There is plenty of precedents for the use of comics by architects, with sundry aims going from experimental depiction of space through the graphic narrative to *pop-art* like appropriation of imagery from commercial genres of fiction and art. This last sort, for instance, was employed by Koolhaas in the *Byzantium* episode of *S,M,L,XL*: a willfully amateurish, fanzine-like comic drawn by Koolhaas’ son, with a wry narrative about the architect’s struggle with his clients. In a way, *Byzantium* foreshadowed the presence of comics in *YIM*; but as Koolhaas once longed to be a movie scriptwriter, Ingels once wanted to be a cartoonist, having a closer relationship with the expressive traits of comics. *YIM* is surely humorous and genre-conscious — with stereotypical versions of typography, caption boxes, onomatopoeias, and speech balloons — but Ingels took comics in a less ironic and much more practical manner. Seeking openly to be “approachable and populist”[22], the use of comics’ narrative mechanisms in *YIM* is direct and effective, with almost no remains of avant-garde craving for aesthetical play and provocation.

But there is another aspect of performativity in *Yes is More*: one main reason for Ingels to utilize comics was that its popularly known conventions allow the control of the pacing and emphasis of the reading experience, which would enable the translation of some subtleties of *orality*, *presence,* and *rhythm* of Ingels’ presential lectures to the book. Therefore, the performance that *YIM* was made to enact was curiously less one of architecture than that of the *architect himself* — the mastermind and poster boy of his self-named “big” brand.

3. Conclusion

This paper is interested in the contemporary relationship between the *ethos* publicly displayed by famous architects — that is, the implicit self-image that establishes their credibility to a public — and the shape given to the medium carrying their presentations of works and ideas. Even if partial, the comparison made in this brief exposition illustrates different usages of graphic language and book design as a tool to elaborate, highlight ad legitimate a professional identity or a brand.

Small, Medium, Large, Extra Large, and *Yes is More: an archicomic on architectural evolution* share a general premise of showing potentials, glories, and vicissitudes of the architectural profession. Both books aim to convey the experience, the conditions, and the thinking behind their office’s *praxis*, and also to graphically perform some of their office’s professional traits. As a design issue for themselves, the configuration given to each book is exemplary of the problem-solving approach of their respective studios: while *S,M,L,XL*’s distinctive structure showcases OMA’s overall belief in exploiting “integration and complication” from every situation, *YIM* expresses BIG’s overall emphasis in “simple lines and clear ideas” to resolve conflicting demands.

At this point, it must be highlighted that the pairing made in this paper contrasted not exactly the two offices — a comparison between their nowadays current profiles would be considerably different — but a *specific moment* in their professional history: that of a turning point in each one’s constitution of a public architectural “self”.

Each book played a different role in that constitution. The intense process of self-reflection and self-representation spent in the making of *S,M,L,XL* matched an effort of professional reinvention; the result is less a closed and sharp definition of what OMA *is* than an expansion and multiplication of what it *could be*. *YIM*’s case is quite the opposite, working not as a self-reflexive moment but as an endeavor of brand building — the simple placement of an already arranged “self” within public awareness. Devoid of angst, the book establishes what BIG “is” and implicitly questions *how far it can go*.

If we consider that one fundamental problem in architecture presentation is the gap between saying/showing and doing/delivering, it seems like an efficient piece of publicity to make a book that not only talks about but explicitly *performs* the things it talks about. And even if the exact similitudes between book and architectural work are not consciously perceived by the reader, he/she can still perceive that there is an unusual effect being produced and that there is thoughtfulness behind the effect. The simple and practical demonstration of thoughtfulness can be sometimes the very thing architecture needs to legitimate itself.

From the chosen couple of manifesto-like monographs, there can be found at least two contrasting attitudes regarding that problem. In *S,M,L,XL*, there is an attempt to build professional legitimacy out of the embedding of provocative and complexifying intelligence in the design presentations and in the publication itself. In *Yes is More*, there is an attitude towards communication that, while also thriving in demonstrations of cleverness in its design presentations, seems nevertheless to take its main factor of legitimation from its capacities for synthesis, easiness, and straightforwardness — qualities that, to be fair, are not often seen in the discourse of architectural stardom.

Architectural praxis always implicates a complex creative interplay with communication, for it requires thinking, notation, and persuasion — and all those instances require means for representing and communicating. That being said, it can be asked that, if the first attitude cited indicates an inclination to the *complexification of representation* to match architectural thinking, would the later one signal a tendency for *simplification of architecture* to match communicative concerns? And, if true, would that difference be primarily an effect of each practitioners’ particularities, or does it signal a much broader historical change in the profession? Future reflections on the subject of architecture connections with media will have to address those questions.

Notes

1 Mario Carpo, *Architecture in the Age of Printing*: *Orality, Writing, Typography, and Printed Images in the History of Architectural Theory* (Cambridge: The MIT Press, 2001), 46-70.
2 Beatriz Colomina, “Architectureproduction”, in *This is Not Architecture: Media Constructions*, ed. Kester Rattenbury (London: Routledge, 2002), 213.
3 Penelope Dean, “Delivery Without Discipline: Architecture in the Age of Design” (Ph.D. diss., University of California, Los Angeles, 2008), 63, ProQuest Dissertations & Theses Global.
4 Bjarke Ingels, interview by Charlie Rose, *Charlie Rose*, June 16, 2015, 8:20–5:44, https://charlierose.com/videos/28939.
5 Rem Koolhaas and Alejandro Zaera, “The day after a conversation with Rem Koolhaas”, El Croquis 79 (1996), 8–25.
6 Rem Koolhaas and Beatriz Colomina, “The architecture of publication: Rem Koolhaas in conversation with Beatriz Colomina”, *El Croquis* 134-135 (2007), 376.
7 For all purposes, this paper’s analysis took under consideration only the first original editions of either book.
8 That description is present in a preliminary concept scheme of *S,M,L,XL’s* from 1989, which was presented in the exhibition “OMA Book Machine: The Books of OMA” at London Architectural Association in 2010. Is noteworthy that, in *S,M,L,XL*, Koolhaas uses the same words to define OMA’s proposal for The Very Big Library in *Strategy of the void* episode — Rem Koolhaas and Bruce Mau, *S,M,L,XL - Small, Medium, Large, Extra Large* (New York: Monacelli Press, 1995) 616.
9 The credits to each text excerpt and picture are finally given at the end of the book, but very discretely: it can take a long time for the reader to discover since the book offers no prior indications that they will be ever credited.
10 Blend of “book” and “magazine”. It’s relevant to remember that, years before *YIM*, that “casual” format had been already adopted by OMA in its not so famous but equally disruptive follow-up to *S,M,L,XL*, the monograph *Content*.
11 Bruce Mau, *Lifestyle* (London: Phaidon Press, 2000), 232-241; Bruce Mau and David Theodore, “Q&A: Bruce Mau on 20 years of *S,M,L,XL*”. *Azure*, November 2, 2017. https://www.azuremagazine.com/article/qa-bruce-mau-on-20-years-of-s-m-x-xl-and-the-role-of-design/
12 Mau, *Life Style*, 326.
13 According to Koolhaas and Mau, Koolhaas’ excessive dedication to the book came to undermine OMA’s regular work. For more, see Rem Koolhaas, Jasper Haan, and Aerie Graafland, “Interview with Rem Koolhaas” in *The Critical Landscape* (Rotterdam: 010 Publishers, 1996); and Mau and Theodore, “Q&A:”.
14 Mélanie van der Hoorn, *Bricks & Balloons: architecture in comic-strip form* (Rotterdam: 010 Publishers, 2012), 135.
15 Bjarke Ingels quoted in Hoorn, *Bricks & Balloons*, 135.
16 Hoorn, *Bricks & Ballons*,135.
17 Rem Koolhaas and Bruce Mau, *S,M,L,XL* (New York: Monacelli Press, 1995), xix.
18 Bjarke Ingels, *Yes is More: an archicomic on architectural evolution* (Köln: Evergreen, 2010), 20-21.
19 Rem Koolhaas, *S,M,L,XL - Small, Medium, Large, Extra Large* (New York: Monacelli Press, 1995) p. xxviii-xxxii. Koolhaas here quotes his reflections about skyscrapers in *Delirious New York* (1978).
20 Koolhaas and Mau, *S,M,L,XL*, 501.
21 Ingels, *Yes is More*, 93.
22 Ingels, *Yes is More*, back cover.

Image Captions

Fig. 1. *S,M,L,XL* (left), and *Yes is More* (right).
Fig. 2. Page spreads of *S,M,L,XL* (ii-iii, 52-53, 84-85, 494-495, 588-589, 602-603,768-769, 880-881,1316-1319).
Fig. 3. Examples of "Dictionary" insertions in *S,M,L,XL*’s spreads: "art images" superimpositions on the left (142-143 and 1098-1099); “world images” interruptions plus “alphabet” on the right (796-797 and 1258-1259).
Fig. 4. Page spreads of *Yes is More* (20-21, 66-67, 949-5, 122-123)
Fig. 5. *Yes is More*, "manifesto" section (2-3, 4-5, 6-7, 8-9, 10-11 e 12-13).

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The Spatial Envelope of Buildings
From Rio de Janeiro to New York

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Abstract

In Goodwin’s *Brazil Builds*, MoMA´s first exhibition on modern Brazilian architecture, he advocates in favor of many similarities between Manhattan and Rio de Janeiro. This is the starting point used here to draw new relations between modern architecture in Brazil and the USA. Unlike relationships between the European avant-garde and Brazilian architecture throughout the 20th century, exchanges, influences, and counter-influences between the two American countries are not often studied.

Therefore we´ll confront a set of Rio’s modern apartment buildings, designed by the so-called “Carioca school” (MMM Roberto, Júlio Barros Barreto, and Nova Cintra – Guinle Park), and another from New York City (Kips Bay Plaza, Chatham Towers, and Eastwood Westview). The focus is to re-examine façade solutions adopted in these two sets of buildings based on the role played by the interaction of space, structure, and closure. We´ll learn from the assembly of a history of solutions adopted to solve the problems of articulation between these three elements in the development of the modern form.

Goodwin credits the innovation and uniqueness found in modern Brazilian buildings to solutions used to handle climatic considerations through facade expansions. On the other hand, also in New York, a relevant number of apartment buildings with patterns of thickening and expansion of the facades coexisted with the neutralizing and dominant flat facade. Thus, we propose to carry out an interpretative critique, showing that the thick facade had a prominent place within the universe of modern American architectural production, just as it did in Brazil. With this, we will find out which thickening patterns are present in New York’s apartment buildings, investigate how they fit together, how they coexisted in an American context of hegemony of the flat facade, and analyze them in comparison to widespread initiatives of facade expansion developed by the Carioca school.

Keywords: space, structure, closure, housing, modern architecture.

1. Introduction: The Spatial Envelope of Buildings

The spatial relationships and plastic effects of buildings are potentiated by a wide-ranging possibility of relations between the frame and the façade. Considering that, this paper aims to analyze the articulation of the frame and the facades – or the so-called spatial envelope of buildings – on modern housing architecture produced in Rio de Janeiro, Brazil, by the Rio de Janeiro school of modern architecture; and in New York City, United States, mainly by the housing initiatives promoted by UDC – Urban Development Corporation. Our main research question lays, contradicting the mainstream narratives, in the recognition of the central role played by the dilated façade and its layered transitional space – resulting from the spatial articulation between the frame and the façade – within the universe of modern American architectural production, just as it did in the Brazilian. With that, we expect to draw new relations between Brazilian and American modern architecture.

Furthermore, considering the housing cell as an indispensable element in the articulation between architecture and urbanism, we will also investigate how closure plans are articulated to establish dialogues between interior and exterior of buildings, differentiating private and public spheres, and defining boundaries and transitions between these domains, thereby helping to understand what kind of city these architectures have potential to generate.

2. Literature Review

We will analyze the facade's composition strategies in modern housing architecture and its connection with the three-dimensional frame by articulating the four author´s theoretical framework.

First, in the late '70s, ROWE explains how the frame and the role it played through the explanation of its universality in the establishment of plastic-spatial relations are the essences of modern architecture.[1] The three-dimensional frame establishes with the building a logic or common system according to which all parts are related or subordinate. If the independent structure delimits a neutral spatial grid that provides some symbols, and for this reason establishes relations, defines the discipline, and generates the form, the three-dimensional frame, in turn, defines a position for the resistant structure and is used as an instrument that guides compositional configuration of the whole, thus acting as a spatial reference device. Thus, the three-dimensional frame has acted as a catalytic element of architecture – in some cases becoming even the architecture itself – to an extent that, for ROWE, modern architecture would be inconceivable in its absence. [2]

Almost two decades later, FRAMPTON, in his book on tectonic culture, examines the role played by structure and construction in the development of modern form, focusing on the relations between space and form, but also from a standpoint of construction´s poetics.[3] Frampton shows, through the work of major architects, how constructional form and material character are integral to an evolving architectural expression and considers the cultivation of the tectonic tradition in architecture as a fundamental element.

In 2008, FANELLI and GARGIANI, in their book on structure and revetment, analyze buildings' facades to present a history of solutions to address a key issue in architecture: the relations between the trinomial space, structure, and closure.[4]

The articulation of the main ideas present in those three books will allow us to analyze buildings from the relations between their frames and their facades plans, with emphasis on construction poetic´s; the articulation between space, structure, and closure in the development of the modern form for housing; the way they relate the problems of comfort and climate with the constructive solutions adopted; and finally, on the way they are combined to establish different ways of relating inner and outer spaces. With that, we aim to advance the knowledge of architecture´s constructive expressive potential for housing.

3. Housing in Modern Architecture, from Rio de Janeiro to New York

> Manhattan and Rio de Janeiro have much in common in that they both have restricted land area near the center; one an island bounded by three rivers, the other a winding strip of partly level land hemmed in by mountains on one side and by the Atlantic and the bay on the other. Whole hills have been scooped off and dumped along the shore to form boulevards, gardens, and airports beyond the old water line. (…). At night the curving line of street lamps along the bays and the well-lighted parks and avenues recall the title Paris once held of the Ville-Lumière, a title to which Rio has some right in these days of general gloom.[5]

Rio de Janeiro and Manhattan configure a very suitable universe for a comparative study, as Philip Goodwin has already pointed out more than 70 years ago in the catalog of one of MoMA´s exhibition on Brazilian Architecture. In addition to the "*much in common*" between them pointed by him, the choice, on the one hand, to focus the research on the production of the Rio de Janeiro school of modern architecture is justified by the fact that it has been a high point in modern Brazilian production, helping to increase awareness of a legacy whose fecundity may not yet be exhausted. On the other hand, the choice for buildings located in Manhattan is justified by the fact that the city was a fertile ground for the exploration of buildings with independent structural system and built-in height, where – despite the hegemony of the image of curtains walls of glass and steel – a varied and expressive range of solutions for solving the problem involving the trinomial space, structure, and closure has been and is still discussed and experienced, thus representing an important source of the repertoire of architectural solutions on the themes this research intends to advance.

Furthermore, the choice of buildings to be analyzed is justified thereto. First of all, with modern buildings, the facade lost its structural function, which generated a new horizon of possibilities of spatial articulation. The aesthetic and functional development of skeletal frame, and consequent discovery of free facade, were accompanied by unprecedented transformations in tectonic and material qualities of facades, redefining the nature of walling in architecture. Deprived of ornament and supporting requirements, walls have become infill, covering, container, or wrapper, positioned behind, between, or in front of open spaces of a frame.

4. Exchanges, Influences and Counter-influences between Brazilian and American Architectures

This paper has two main objectives. The first one is related to the potential to expand the connections and impacts between American and Brazilian architectures. Unlike the relations between the European avant-garde and Brazilian architecture throughout the 20th century, which has been the subject of numerous investigations, exchanges, influences, and counter-influences, American and Brazilian architectures are not yet so frequently studied in a comparative perspective.[6] Added to this is a request to work with comparative visions among the Americas, with themes involving distinct realities and how they have developed in each of these realities, and how they can influence each other´s development.

The second one is related to widen the scope of design strategies to the housing cell, investigating comparatively the development of the articulation between the frame and the facade in Brazilian and American modern architectures. To this end, we aim to investigate two themes that are relevant to modern architecture: the facade understood as a dilated transition between interior and exterior; and the use of horizontal or vertical planes, thickenings of walls, grids or filters as multipurpose devices, which act not only as protection and shelter elements but also as plastic devices. The study of these elements and their compositional processes implies addressing recurrent architectural issues in modern production, such as the relations between structure and fence, and structure and internal spaces; composition having a recessed structure as a base; different types of filters used; relativization of the separation between internal and external air; use of balcony as a traditional device transposed to high-rise buildings; the internalized balcony or the attached balcony, among others. And one of the means of constructing this repertoire is to pursue the reciprocity between intentions behind the architectural design and the building imperatives while retaining the focus on the tangible materiality and the constructive expressive potential of architecture.

5. The Buildings

The modern architecture produced in Brazil and the United States was presented in architectural exhibitions held by the MoMA on recurrent occasions from the early 1940s. Brazil was in evidence in *Brazil Builds: Architecture new and old 1652-1942*,[7] dated 1943, greatly influenced by a commitment of the MoMA in promoting the overcoming of the aesthetics of the International Style; in *Latin American Architecture since 1945*,[8] 1955, when the idea of a "Carioca school" appears for the first time; and the most recent *Latin America in Construction: Architecture 1955-1980*,[9] of 2015, which highlights the leading role played by Brazil in the Latin American context in the invention of the new forms of modern architecture and the new investees in relation to programs of housing. The modern architecture produced in the United States was also evidenced by the MoMA in *Built in USA: 1932-1944*,[10] of 1944, which ends up marking a timely parallel with the first Brazilian exhibition and the emergence of its modern architecture, since it coincides with the works shown in Brazil Builds; and in *Built in the USA: post-war architecture*,[11] 1952, which deals with the flourishing of American production in the postwar period and with the idea of continuity of this tradition.

Those exhibitions, besides playing an important role in the projection of modern Brazilian architecture in the American context, also provide evidence about the main movements of production of housing architecture in Brazil and the U.S., as well as on temporal differences found between them. While in the Brazilian case the apartment buildings are a relevant and recurrent theme in the emergence and consolidation of modern architecture from the 1940s until de 1960s, in America the most innovative experiments on the production of apartment buildings are undoubtedly located from the 1960s on. Especially in New York's case, this movement was linked to policies of decrease of the housing deficit and social and racial inequalities, with the creation of the Urban Development Corporation (UDC, an agency created in the Lindsay administration that operated between 1968 and 1975 to promote and finance the construction of housing for the middle and lower classes of the State of New York) and, consequently, with the replacement of small-scale tenement apartments buildings that make up the historic fabric of the city's traditional streets by modern high-rise apartment buildings. That is, the main housing construction movement in New York is linked to a period after the most important initiatives in the construction of modern Brazilian and Carioca apartment buildings, concentrated to a large extent around the Second War and in the immediately subsequent years.

Based on those identified as the main production movements of modern apartment buildings´ construction in Rio de Janeiro and New York, an initial universe of three works in each city was selected to be investigated. In the case of Rio, we used the MoMA´s catalogs as the initial source of research. In the case of New York, the selection was based, on the one hand, on the main experiments carried out

by the UDC and, on the other hand, on buildings contemporary to UDC that presented singular solutions for the theme of the articulation between the frame and the facade. Furthermore, the buildings are presented and analyzed in pairs, according to design strategies related to the façade´s composition. The aim is to present a wide range of design solutions:

design strategies	buildings in Rio de Janeiro	buildings in New York
façade dilated by concrete brise-soleil	Building MMM Roberto Irmãos Roberto, 1945	Kips Bay plaza, I. M. Pei and James Ingo Freed – Pei Cobb Freed & Partners, 1960-65
facade dilated by balconies	Building Julio Barros Barreto Irmãos Roberto, 1947-50	Chatham Towers Gruzen & Partners, 1959-65
façade dilated by displaced volumes or displaced glass planes	Building Nova Cintra, Guinle Park Lúcio Costa, 1948-50	Eastwood e Westview (Roosevelt Island) Josep Lluis Sert – Sert Jackson Associates, 1976, UDC

5.1. Facade dilated by concrete brise-soleil



Fig. 1

The building MMM Roberto (Fig. 1), designed by Irmãos Roberto in 1945, is an order of the architects´ family for its members and is a low-cost construction located on the main commercial avenue in Copacabana, in Rio de Janeiro. The main volume is a regular prism covering the entire width of the land, with 21m high, composed of a commercial ground floor, seven standard floors with an apartment of 143m^2 per floor, and the eighth floor with a unit of 70m^2 combined with a front terrace, resulting in 8 residential units. The main facade, 12m wide and facing west, consists of two planes: a perimeter indented plane, which forms a kind of negative with the neighboring buildings, and a frontal plane, aligned with the neighbors, formed by the compound set by balcony (2.5m deep) and concrete grid (1m deep) attached, and responsible for the thickening of the facade. The concrete grid articulates vertical elements at regular intervals with horizontal elements alternating intervals of two different heights. It is filled with movable wooden shutters painted in yellow (as well as the internal frames), performing the function of horizontal brises-soleil. The expansion of the façade occurs, therefore, in several layers, resulting from the articulation of the balcony with the concrete grid and the wooden shutters.
Kips Bay Plaza (Fig. 1), in turn, is a large-scale housing complex, designed in 1960 by I. M. Pei and James Ingo Freed and completed in 1965. It is located between 30th and 33rd Streets in Manhattan East. Comprising two 21 floors apartment slabs, a central plaza with shopping, and 3 floors basement for parking, the complex adds up to 560 housing units per block. The standard floor has 28 apartments facing either north or south and distributed along a central corridor. Both twin slabs are oriented to the New York City grid and positioned to maximize skyline and river views. Each slab is composed of a cast-in-place 1m deep concrete grid that provides both structures and finishes, and the curved intersections

of the grid are responsible for expressing the fluid character of the structural pour. Each apartment comprises 2 or 3 grid units, except two larger apartments on the corners. Since the facades act as load-bearing walls, the space inside the building has fewer internal supports. As a result, the structure is clearly expressed on the building closures. Furthermore, the grid that structures the facade composition protects the units interior space from glare and direct sun (since each module is filled with glass panels from floor to ceiling), while at ground level it opens to a shared public plaza in order to bring the buildings into unity with the surrounded areas.

5.2. Facade dilated by balconies



Fig. 2

Julio Barros Barreto building (Fig. 2) was designed in 1947 by Irmãos Roberto and built in 1950. The building is located on the plot`s corner with sloping topography and distant 200m from Botafogo`s beach seashore, a place of generous landscape, overlooking Guanabara Bay and Sugar Loaf, two important Rio de Janeiro's landmarks, and consists of two blocks (40m x 10m and 65mx12m), each containing five rows of double-height apartments varying from 110m² to 150m². The structural module is 6,50m wide, combining various spans in depth. The plinth is recessed in relation to the body of the buildings and was originally destined to contain storage and commercial spaces. Responding to the topography, blocks are placed at different levels, set away from the plot`s limits, and are hinged in an angle, connected by walkways to a vertical circulation tower containing elevators and stairs. The building presents a singular and complex system of spatial distribution and circulation, with vertical interpenetrations, resulting from the section´s use as the main instrument of spatial exploration. As all units comprise two floors, balconies in the front façades assume double-height, promoting spatial integration between different sectors of the unit. The upper window frames that open onto the verandas – or balcony gardens – are protected by Venetian blinds with a mixed run and tilt system. The spatial distribution of apartments and circulation spaces running along the back façade intercalate social and service access on different floors.
Chatham Towers development (Fig. 2) was part of a slum clearance project stage-managed by Moses that reshaped the area between Brooklyn Bridge and Chinatown in Downtown Manhattan, on the intersection of Park Row and Worth Street. The aim was to wide-spread modernist housing for the middle class. Designed between 1959 and 1965 by Grunzen & Partners – known as one of the main references in brutalist design in NYC –, the two 25 stories board-formed concrete high-rises house 120 units each (5 per floor), half of which with a double-height balcony. The space surrounding the two towers is an elevated plaza with a play area and a concrete plaza, creating a concrete wall at street level that contributed to the segregation of the development from the neighboring. Chatham Towers was completed in 1965 with load-bearing walls and flat slab construction, as well as exposed, board-formed concrete poured on-site on the exterior. It is among the first concrete residential tower in the city, and its exposed structure is used as part of the building´s facade composition. While I. M. Pei had already experimented with highly refined cast-in-place at Kips Bay Plaza (1960-1965), Kelly & Gruzen introduced a much blunter approach, with broad planes and rough surface treatments. The windows are double-glazed with built-in Venetian blinds and pivoted opening, and the interior walls are two 1-inch layers of drywall with an air space between for sound control. The articulation of a monolithic solid with a distinctive alternation of corner balconies – two floors of balconies between two floors without – is responsible for both façade dilations and the building´s architectural expression, and produces a serrated silhouette in contrast to the sheer vertical lines of the tower themselves. The balconies are at

the corners of the buildings but their corners are fully walled, which limits the views but also gives the buildings a robust and sculptural quality.

5.3. Facade dilated by displaced volumes or displaced glass planes



Fig. 3

The Nova Cintra (Fig. 3) is part of a group of buildings designed by Lucio Costa between 1948 and 1952 in the newly created Guinle Park. The complex is composed of three multifamily buildings: Nova Cintra (1948), Bristol (1950), and Caledonia (1952). Measuring 65m x 15m, each block has an independent concrete structure with modules of 4.20m x 6.20m, flat slabs projecting beyond the supports, a ground floor with pilotis in double-height, and a parking garage in the basement. Its plot is limited by a street to the south and a mansion to the west. The insertion proposed by Lucio is a broken line forming a segmented arch.[12] As consequence, Bristol and Caledonia were implanted along the sloped edge of the terrain, implying unfavorable solar orientation, with its main façades facing the afternoon sun as well as the park and beautiful view beyond the mansion. Their distinguishing feature is precisely the way Costa responds to such conditions, by protecting west facades with a combination of vertical brise-soleil and perforated bricks – cobogós – which partially cover a sequence of loggias along their main façade`s whole length. The Nova Cintra, the first to be built, is aligned with the street, with its main glazed façade facing southeast. The volume is responsible for making a transition between park and city. Unlike the others, where the building entrance in the pilotis is reached through an open platform interspersed by gardens, stairs, and ramps, in Nova Cintra, due to its more urban condition, the plinth has shops and services placed slightly above street level, accessible from street through a garden. In the body, in the southeast façade facing the street, glass planes inserted between slabs are parted in three heights, with a fixed lower module painted on its inner face, blue, referring to the window sills, and two movable upper guillotine modules that descend to the floor. This composition strategy results in a glass plane dilated into three parts. The Northwest façade of the block is similar to the west façades of Bristol and Caledonia, alternating vertical brise-soleil and cobogós covering a set of loggias.
Eastwood and Westview (Fig. 3) were constructed as part of Mayor Lindsay's 1966 intention to develop the Roosevelt Island, under the coordination of the newly established New York State Urban Development Corporation (UDC). The masterplan for the Island was approved in 1969, and the UDC started splitting the commission between architects. Different offices were in charge of housing. Eastwood and Westview Apartments were in charge of Sert, Jackson & Associates, and completed in 1976. It´s the largest housing complex on the island, with 1003 units distributed in 10 connected buildings, stepped back from the water and forming three courtyards, each with its own community facilities. Three small open-air passageways open the way to the promenade along the river. According to the original masterplan, Sert positioned the lowest slabs, with five stories, along the river, opening up the panoramic views from the rising towers. The slabs positioned perpendicular to the river increase gradually in height in direction to the Main Street, starting from 5 and reaching 22 stories, preserving water views and following Main Street 7 stories pattern. Along Main Street, the buildings form a pedestrian arcade, raised above the sidewalk by smooth poured concrete columns. The facade is comprised of precast board-formed striated concrete panels, and Sert left the mortar lines on the facade visible, giving the panels a tiled pattern. He pursued the material subtleties of precast construction. Each facade is composed by the articulation of horizontal continuous windows with displaced alternating vertical volumes – each one composed of two windows and responsible for the facades´ thickening.

7. The Dilated Limits and the Intermediate Transitional Spaces

> While the first impetus came from abroad, Brazil soon went ahead on her own. Her great original contribution to modern architecture is the control of heat and glare on glass surfaces by means of external blinds. North America has blandly ignored the entire question. Faced with summer's fierce western sun, the average office building is like a hot-house, its double-hung windows half-closed and unprotected. The miserable office workers either roast or hide behind airless awnings or depend on the feeble protection of Venetian blinds, - feeble because they do nothing to keep the sun from heating the glass. It was a curiosity to see how the Brazilians had handled this very important problem that really instigated our expedition. [13]

As explained by Goodwin in his text to MoMA`s 1943 catalog, his motivation to investigate Brazilian modern architecture of the period is directly related to the theme of expansion and thickening of facades. Goodwin credits the innovation and the singularity found in modern Brazilian buildings to its solutions adopted to the problem of the climatic considerations. These solutions, equipping the facades with the most varied types of *brise-soleil*, filters, and other sun protection elements, singled out the Brazilian architecture, attentive and already familiar with the modern solutions that were being implemented in countries like France and Germany. Many of these solutions originated in Rio de Janeiro, although they have spread throughout much of the country.
The adoption, in Brazil, of these varied solutions for the climatic protection of facades caused a dilating effect on buildings` closing plans, which started to have an active behavior as envelopes. Filled and empty screens generated by combinations of glass panels, thick balconies, and filters configure, whenever they were tested and applied, a system of layers that, due to different degrees of permeability, end up diluting the facade's assigned sealing function. The combination of these sequences of closing planes, sometimes turned into balconies, with filters and other protection elements, is also responsible for an idea of the facade's thickening and dematerialization, which then happens in several layers or planes. The development of sun protection elements also led to a denial of the frontality of the facade, creating an in-between spatiality that belongs both to the interior and to the exterior.[14] That is, the Brazilian colors of this modern architecture – or what moved it a few steps beyond the European and North American reference[15] – were precisely in the synthesis of the climatic considerations of each facade with the imperatives of industrialized construction, of prefabricated and repetitive elements, allied with the individual expressions of each architect (Fig. 4 and Fig. 5).

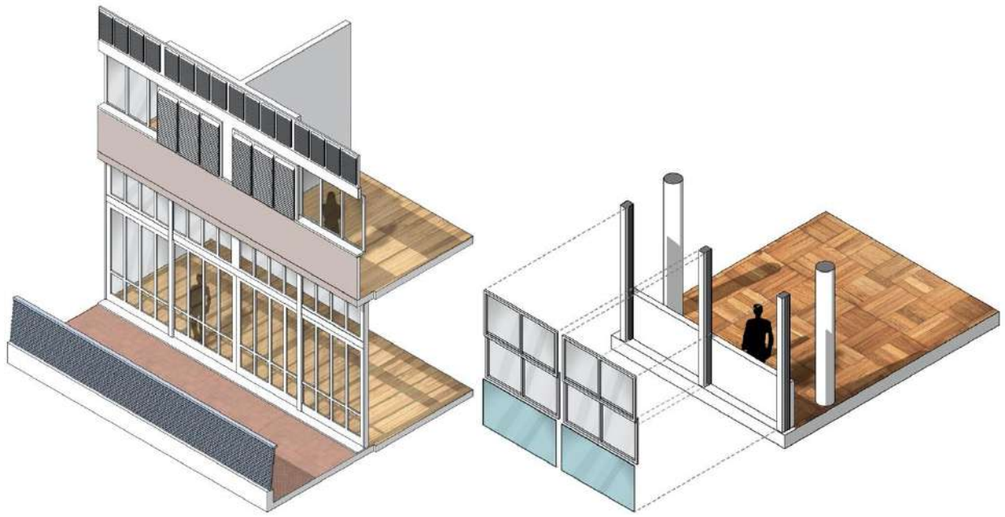


Fig. 4 and Fig. 5

At the same time, in the United States, transformations brought about by the introduction of independent structural systems, be it steel or concrete, are allied in a very significant way with those resulting from incorporating mechanization techniques in buildings.[16] In addition to that, the question faced by the American offices about the automatization of architecture led to a production where the flat, neutralizing facade, which took shape largely through the glass wall curtains, has found a thriving development path. In this production, when the dilation and thickening of the facade appears, it is largely for technical or constructive reasons. That is, the hegemonic architecture included the mechanization of the building and the facade, and the problem of the solar heat load is solved by means of a neutralizing glass wall. These are, according to Leatherbarrow, the facades of "anonymity".[17] And, according to Huxtable, these modern, mechanized glass walls were responsible for giving the New York landscape its flat, shiny surface and geometrically modulated structures, especially in the postwar period. [18]

However, a closer look at the modern housing architecture produced in New York in the enlarged decade concentrated around the 1960s shows that coexisted with the flat neutralizing facade a significant volume of buildings built from the thickening and dilating patterns of the facades. As in Brazil, also in the United States, the advantages of associating transparent glass membranes with an idea of the dematerialization of the facade plane, whether from the thickening of the walls or the transformation of the facade into a system formed by a sequence of transparent elements, translucent or opaque layers placed in different planes, allowed the development of new ways of configuring the closing planes. And so, as in the Brazilian examples, the selection and configuration of these various layers also produce, through the expansion of the transition between interior and exterior, and in-between spatiality that enables concomitant visualization, lighting, ventilation, shading, and shelter.

Nevertheless, even if the question of the dilation of facades is present in the two realities, their presence materializes in different ways in each place. While the form of the modern Brazilian apartment building is more open and porous, in American examples the shape is generally more closed and less porous. At the same time, in the case of the American apartment buildings, facade dilation solutions are more linked to the incorporation of balconies and intermediate transitional spaces or the creation of open horizontal corridors, especially in cases where there is an option for duplex apartments, while in the case of Rio de Janeiro the question of the dilation of the facade is also associated with the problem of climatic considerations. Considering these peculiarities, we can say that the factors that determine the preference to solve the intermediate spaces through the facade thickening go beyond climate considerations, especially in the American examples.

Furthermore, also the way how the trinomial space, structure, and closure are equated in this context differs in each of the objects in the study. The analysis of the relations between space, structure, and closure leads to two main themes from which we can look at New York apartment buildings and, with this, to seek lessons that can be used to think about the development of the idea of the dilated facade since its first experiences in the Rio de Janeiro's context, passing through later New York experiences, and, consequently, how we can think of its actualization in contemporary Brazilian and American realities. This approach seeks to broaden the idea of influence and counter-influence mentioned by Lara.[19]

The first issue concerns the autonomy of the facade and its presumption of a distinction between structural and non-structural elements of the building, or between structure and closure. The second theme concerns the way in which each building incorporates and elaborates the recourse of recessing or pushing back the pillars to the interior, a solution that Fanelli and Gargiani[20] appoint as the fundamental constructive principle of Le Corbusier's five-point theory – from which the others derive, mainly the free facades and the horizontal windows. Therefore, the recess of the pillars in the interior also plays a fundamental role in the possibilities of thickening of the facades.

8. Conclusions: Learning from a History of the Solutions to the Dilated Facade in the Apartment Building

Apart from the idea that each nation builds for its climate, and in addition to enumerating the advantages or disadvantages of the dilated facade and the flat facade, or proclaiming the victory of one over the other, this paper intends, with these comparatives analyzes, contradicting the main narratives, to demonstrate that the thick facade had a prominent place within the universe of modern American architectural production, just as it did in the Brazilian. We explored a repertoire of patterns of thickening present in the New York apartment buildings, in order to investigate how they fit, how they coexisted in an American hegemonic context of the flat facade, and to analyze them comparatively to the very widespread initiatives of facade dilation developed by the Rio de Janeiro school of modern architecture. Furthermore, the analysis of modern apartment buildings´ facade solutions constructed in Rio de Janeiro and New York from the role played by the trinomial space, structure, and closure showed that the factors that determine the preference for the flat or the thick façade, as well as the way the dilation is solved, go beyond climate considerations, especially in the American case. Factors such as the technical reasons, materiality, construction system, issues concerning the autonomy of the facade, and the position of the structural elements in relation to the closing planes appeared prominently, deconstructing the premise of climate considerations as the only or the most outstanding reason for facade dilation. And, in addition to that, the repertoire composed by the design solutions here exposed allowed us to learn from the assembly of a history of the solutions to solve the problems of articulation between space, structure, and closure in the development of modern form, in order to reflect on an idea of updating the dilated facade in the current context.

Notes

1 Rowe, Colin. *Chicago Frame.* In: *The mathematics of the ideal villa and other essays.* Cambridge: The MIT Press, 1976, pp. 89-117
2 Rowe, 1976, p. 89-117.
3 Frampton, Kenneth. *Studies in tectonic culture. The poetics of construction in Nineteenth and Twentieth Century Architecture.* Chicago: The MIT Press, 2001.
4 Fanelli, Giovanni; Gargiani, Roberto. *Histoire de l'architecture moderne. Structure et revêtement.* Lausanne: Presses polytechniques et universitaures romandes, 2008.
5 Goodwin, Philip L.; Smith, Kidder. *Brazil Builds. Architecture new and old 1652-1942.* New York: The Museum of Modern Art, 1943, p. 95-96.
6 "It is well known that the cultural policies of the United States in the 1940s played an important role in spreading Brazilian modernism abroad, and the success of this southern modernity influenced the United States during the following decades. But no one has worked this counter-influence rigorously until today". Lara, Fernando Luiz. *Excepcionalidade do modernismo brasileiro.* São Paulo/ Austin: Romano Guerra Editora, 2018, p. 141.
7 Goodwin, Philip; Smith, Kidder. *Brazil Builds. Architecture new and old 1652-1942.* New York: The Museum of Modern Art, 1943.
8 Hitchcock, Henry-Russel. *Latin American architecture since 1945.* New York: Museum of Modern Art, 1955.
9 Bergdoll, Barry; Comas, Carlos Eduardo Dias; Liernur, Jorge Francisco; Real, Patricio del. *Latin America in Construction: Architecture 1955-1980.* New York: The Museum of Modern Art, 2015.
10 Mock, Elizabeth; Goodwin, Philip L. *Built in USA: 1932-1944.* New York: Museum of Modern Art, 1944.
11 Hitchcock, Henry-Russel; Drexler, Arthur. *Built in USA: post-war architecture.* New York: Museum of Modern Art, 1952.
12 Wisnik, Guilherme. *Lucio Costa.* São Paulo: Cosac Naify, 2001, 87.
13 Goodwin; Kidder, 1943, p. 81-84.
14 Leatherbarrow, David.; Mostafavi, Moshen. *Surface Architecture.* Cambridge, Massachusetts: The MIT Press, 2005, p. 58.
15 Goodwin; Kidder, 1943, p. 81-84.
16 Frampton, 2001, p. 381.
17 Leatherbarrow; Mostafavi, 2005, p. 78.
18 Huxtable, Ada Louise. *Four Walking Tours of Modern Architecture in New York City.* New York: Museum of Modern Art, 1961, p. 8-10.
19 Lara, 2018, p. 141.
20 Fanelli; Gargiani, 2008, p. 283.

Image Captions

Fig. 1. Buildings MMM Roberto, Irmãos Roberto, Rio de Janeiro; and Kips Bay Plaza, I. M. Pei and James Ingo Freed, New York. Font: http://www.leonardofinotti.com and https://www.nycurbanism.com/brutalnyc/kips-bay
Fig. 2. Buildings Julio Barros Barreto, Irmãos Roberto, Rio de Janeiro; and Chatam Towers, Grunzen & Partners, New York. Font: http://www.leonardofinotti.com and https://www.nycurbanism.com/brutalnyc/chatham-towers.
Fig. 3. Buildings Nova Cintra, Parque Guinle, Lúcio Costa, Rio de Janeiro; and Eastwood and Westview, Sert, Jackson & Associates, New York. Font: http://www.leonardofinotti.com and https://www.nycurbanism.com/brutalnyc/2017/2/15/eastwood.
Fig. 4. Isometric view of one unit´s main facade, building Julio Barros Barreto, Irmãos Roberto, Rio de Janeiro. Font: drawing by Jonatas Sousa da Costa and Mara Oliveira Eskinazi, 2020.
Fig. 5. Isometric view of one unit´s main facade, building Nova Cintra, Lúcio Costa, Rio de Janeiro. Font: drawing by Jonatas Sousa da Costa and Mara Oliveira Eskinazi, 2020.

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Eisenman and Reich:
confluences and divergences between formal operations

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Abstract

This article compares the formal operations employed by the American architect Peter Eisenman with concepts stipulated by the American composer Steve Reich. This comparison concerns Eisenman's *Houses II* (1969-1970) and the concepts elaborated in the text Music as a Gradual Process (1968), by Reich, with special attention to an operation employed by him known as *phasing*, used particularly in his piece *Piano Phase* (1967).
Both Eisenman in architecture and Reich in music addressed in their works made in the 1960s and 1970s not only the knowledge that constitutes the theory and practice of their respective disciplines, but also, influences from the so-called Minimalists emerging in the New York art scene in the same period with artists such as Robert Morris, Richard Serra, Donald Judd, Sol LeWitt, and Carl Andre. Eisenman and Reich sought to elaborate works, be they architectural or musical, in which the final result and the operations used for their realization coincide: process and work become a single object.
As a methodology, diagrams and images referring to the development of Eisenman's *House II* will be employed together with diagrams of Reich's *Piano Phase*. The approximation of such images, in addition to explaining the operations used by both, works as a means of comparing the approaches of each one, their similarities and divergences, as well as how the idea of one or more operations can generate a complete work.
The purpose of this article is not only to make explicit the correspondences and discrepancies between works made in different disciplines (architecture and music), which, however, have as their main concept the notion of process as an element that delimits form and content but also to show that both disciplines can appropriate knowledge from each other.

Keywords: Eisenman, Steve Reich, Operations, Phasing.

1.Introduction

What drives the present study is the identification of some hasty interpretations about certain artistic and architectural production that have, in their genesis, a set of established rules, to some extent arbitrary, and processes of abstract character representation. Such characteristics or way of proceeding often establishes a result that we could define as *Uncanny*[1], borrowing the concept of Vidler (1990) to adjust familiar aspects with aspects of estrangement caused by both Eisenman's architecture and Reich's music. As a hypothesis, these ways to proceed would mistakenly indicate in music what could be a discrepancy in relation to the Western musical tradition; in architecture, they would indicate ways of operating in non-anthropomorphic manners, non-aligned with the conception of classical architecture (Vidler, 1990) — even though the modern movement has put them in check — and which we believe to be a limited interpretation.

The idea of comparing Eisenman's *House II* with Reich's *Piano Phase* is born of a certain similarity found between the two works, emphasizing that this is a similarity that can only be detected based on a familiarity that transits between the discipline of music (minimalism) and architecture. The idea of the research that we–present partially in this Conference is to demonstrate, through diagrams that bring them together, which operations are common to both works and what we can extract from them as a critical possibility that allows new interpretations of the works in question, with the main focus on architecture. In addition to this exploration, it is necessary to clarify some points about Peter Eisenman's architecture of the 1960s/70s and about Steve Reich's composition.

2.Eisenman: generic form and specific form

In his thesis *The Formal Basis of Modern Architecture* (1963), Eisenman stipulates the existence of two types of forms, generic and specific. The generic form is characterized as *"[...] a definable entity with its own inherent laws [...]"* (EISENMAN, 2006, p.33) and the specific one as *a "[...] physical configuration realized in response to a specific intent and function [...]"* (Ibidem, p.35). Exemplifying these definitions, Eisenman names the cube as the form that is not only elementary but also transcendental in its properties:

> The cube as a centroidal shape evolves equally in a vertical and horizontal direction from a defined centrum. This quality is primary to the understanding of it. Of secondary importance are the equality of vertical and horizontal axes, the equality of all surfaces, the diagonal axes, and the location of all the corners. But the essential point to note here is that these properties of the cube, as of any generic form stand above any aesthetic preference. They are, quite simply, inherent characteristics that can only be considered in an objective sense; they establish the absolute nature of the generic form, and by definition its transcendence over the specific form. (Ibidem, p.35).

Derived from particular functions and intentions, the specific forms are relative, i.e. subject to *"[...] perceptual responses of anesthetic or subjective nature, i.e., to such factors as its proportion, surface quality, structure, symbolism, etc. [...]"* (Ibidem, p.37). Such interpretations are not required of generic forms since, for Eisenman *"[…] it is not a question of our liking or disliking a cube: it is a question of our accepting its existence and recognizing its inherent properties"* (Ibidem, p.37).

3.Eisenman: diagrams, grid, and process

Also, in *The Formal Basis of Modern Architecture*, Eisenman proposes a formal analysis of works by Le Corbusier, Frank Lloyd Wright, Alvar Aalto, and Giuseppe Terragni through diagrams. With this, he opens a discussion that is established on the diagrams of Rudolf Wittkower[2], and then Colin Rowe, to whom Eisenman formulates a direct criticism. According to Eisenman:

> while Wittkower's and Rowe's diagrams essentially relied on an analysis of the formal as a stable and *a priori* condition, my diagrams contained the seeds of something else: they proposed the possible opening up of the formal interiority of architecture to the concerns of the conceptual, the critical and perhaps to the diagramming of a pre-existing instability in this interiority […]. My use of diagrams proposed a different rationale, one that could be both more logical and more involved with a process of architecture somewhat distant from the design process of the traditional author-architect. Such logic could not be found in the form itself, but rather in a diagrammatic process [...] (EISENMAN, 1999, p.48-49).

Despite the criticism, we can observe, later, that Rowe's diagrams in his essay *The Mathematics of the Ideal Villa*[3], enables analogies with *House II* that will support part of this argumentation. However, the most relevant diagrammatic analysis that influences in a significant manner the projects of the first *Houses* is derived from Terragni's *Casa del Fascio* (1936). It is Terragni's use of a regulatory grid that establishes a formal logic for successive displacement and discontinuity operations analyzed by Eisenman in his diagrams that will become the main instrument in his *House* projects that use *"[...] a finite original scheme* (which) *can produce infinite configurations"* (CORBO, 2014, p.10).
According to Eisenman in his thesis, the regulatory grid *"[...] provides an absolute reference for the architectural form, whether generic or specific"* (EISENMAN, 2006, p.63). Configured as a nine-square grid in the *Casa del Fascio*, such two-dimensional arrangement (a diagram-plan) would be used by

Eisenman in his *Houses II*, being this grid studied by Rudolf Wittkower and his pupil Colin Rowe. In turn, it is from Wittkower's and Rowe's formalist diagrammatic experiences that the *Nine-Square problem*, developed by John Hejduk in the 1950s at Texas University, emerged. Considering that the *Houses* of Eisenman are from the 1960s/70s, the elaboration of the *Nine-Square Problem* is the abstract matrix that will be decisive for the design of the first *Houses* and the operations employed in them (Lacombe, 2007).

4.Eisenman: minimalism and process

Starting in 1967 (Robins, 1984, p.8) artists such as Robert Morris and Richard Serra began producing works that were not only the result of a given operation but also a perceptible record of it. That is, the artwork reveals a process, in progress or concluded that is *"more than a method [...], becomes the product itself [...]"* (BURTON, 2012, p.74), and this product is the result of an intelligible modification, proper to the intrinsic qualities of the material that constitutes a given work (Krauss, 1977, p.272). In *Sentences on Conceptual Art* (1969), Sol LeWitt states about the quality not only operative of this type of practice but also about its consequences that:

> 7. The artist's will is secondary to the process he initiates from idea to completion. […]
>
> 28. Once the idea of the piece is established in the artist's mind and the final form is decided, the process is carried out blindly. There are many side effects that the artist cannot imagine. […]
>
> 29. The process is mechanical and should not be tampered with. It should run its course. […] (LEWITT, 2006, p.205 e 207).

The materials and operations would therefore have greater relevance than the final object, that is, *"[...] the means count more than the ends"* (ATKINS, 1990, p.135). Just as in such practice *"[...] the process of making the work becomes the subject of the work [...]"* (WALKER, 1977, p.248), the various formal operations employed by Eisenman in his *Houses* implied that *"[...] the process made the rules* (chosen formal operations) *intelligible [...]* (he) *was not interested in the result — architecture being just the final moment of the process"* (CORBO, 2014, p.31). Formal operations in Eisenman can therefore be interpreted as

> strategies of defamiliarization […] (that) attempt to make the processes of the object's production and the mechanisms of its representation part of its content. The object does not attempt to pass itself off as unquestionable, but rather to lay bare the devices of its own formation so that the viewer will be encouraged to reflect critically on the particular, partial ways in which it is constituted […] (HAYS, 2010, p.55).

Process in the art (and consequently in his architecture), as Eisenman describes, *"[…] was about […] the removal of the subject, creator, the narrator, from between the receiver and the object […]* (producing) *a new phenomenological structure […]"* (EISENMAN, 1978). But, even with such similarities presented, the idea of process in Eisenman differs in certain aspects of the artists cited. According to Allen (2006, p.58) in LeWitt the process is serial, exhausting, without a starting point or end, in Eisenman, the series begins with a simple form and follows a narrative of increasing complexity and results in a building. It is worth mentioning that the cumulative process *"[...] becomes, through the exhaustion of possibilities, the object"* (KAJI-O'GRADY, 2001, p.151) thus maintaining *"[...] an idea of authorial intention [...] even if through a semiautomatic process"* (ALLEN, 2006, p.59).

5.Reich: process music and *phasing*

Simultaneously with the fact that the artists mentioned used perceptible processes in their works, in the discipline of music composers began to use the same ideas. Both the American John Cage and the German Karlheinz Stockhausen since the 1950s already composed a type of music from which *"the material and the constitution of the material become united"* (STOCKHAUSEN, 2009, p.41). However, the processes employed by the composers in question were imperceptive to listeners, a situation that changed when La Monte Young, Terry Riley, and in particular, Philip Glass and Steve Reich began composing their first works of relevance in the 1960s also inspired by the visual arts described.

Serra, along with other artists, had his works presented in an exhibition that occurred between May and July of 1969 at the Whitney Museum, called *Anti-Illusion: Procedures/Materials*. Organized by the curators James Monte and Marcia Tucker, *Anti-Illusion* was one of the first North American exhibitions of considerable proportions to highlight the practice of the process as an autonomous discipline of art in the cultural context of the country (Walker, 1977, p.248).

The exhibition catalog contained scores by two composers associated with Serra who performed at the event: Philip Glass and Steve Reich, both considered exponents of minimalism in music. Serra, Glass,

and Reich — and consequently the other artists present in the exhibition — were *"[...] interested in processes and time"* (SERRA, 2014, p.316). Specifying these characteristics, the *Anti-Illusion* catalog brings reproductions of scores whose *"[...] compositional process and sounding music become one [...]"* (POTTER, 2010, p.4). One of these pieces is Reich's *Piano Phase* (1967), based on a technique accidentally discovered by the composer in 1965 (Reich, 2004b, p.20), called *phasing*. Such operation consists of using two identical musical phrases whose cyclic execution occurs simultaneously, however, due to the discrepancy in the speed of one of these phrases, it begins to *phase* in relation to another, eventually returning to its original state (Strickland, 2000, p.188). First published in the catalog of the exhibition *Anti-Illusion*, is also the essay *Music as a Gradual Process* (REICH, 2004d), characterized by being *"[...] a collection of aphoristic observations and ideas [...]"* (HILLIER, 2004, p.16) about the music Reich composed up to that moment.

6.Eisenman and Reich: *Houses* and *phasing*

Between 1967 and 1978, Peter Eisenman produced a set of ten projects corresponding to his *Houses*, all named numerically from *I* to *XIa* (in this sequence *House IX* and *XI* are non-existent). Some of these projects were built (*Houses I*, *II*, *III,* and *VI*), while others were limited to diagrammatic studies carried out without a terrain or a previously selected client (*Houses IV*, *V*, *VII,* and *VIII*), and the others (*Houses X* and *XIa*) were in fact designed for terrain and a specific client, however, they were not built (Izar, 2015, p.156). In this series of projects Eisenman puts into practice the knowledge acquired from the elaboration of *The Formal Basis of Modern Architecture*, particularly his analysis of Le Corbusier and Terragni, together with the use of formal operations, a fact that brings his practice closer to process art itself (and consequently to process music). In his *House I* (1967) Eisenman employs an operation in which two different grids are overlapped (an ABABA grid — the same one present in Palladio's *Villa Malcontenta* and Le Corbusier's *Villa Stein* — overlaid on an ABAA grid). The other Houses employ operations such as *"[...] shifts (House II), rotations (House III) […] or inversions (House VI)"* (KORMOSS, 2007, p.33).

Considering the fact that the present article intends to establish the relations between the operations employed by Eisenman in his *Houses* and those of Reich's work (*phasing* in particular), in addition to the chronological aspects (the first House designed by Eisenman is from 1967 while Reich's first work to employ *phasing* is from 1965), operational aspects themselves were taken into account. *House I,* in which Eisenman overlaps distinct grids, was not appropriate since *phasing*, according to Reich, can occur only among identical elements (Reich, 2004c, p.66). *House II* was then chosen as the object of study not only because it presented an operation of shifts between identical grids (*phasing*), but also because it is the first project in the *House* series to employ the cube, diagram, and the nine-square grid simultaneously; three design instruments discussed in this article.

Reich's *Piano Phase* (1967) was chosen for being included in the catalog of the *Anti-Illusion* exhibition as an example of the so-called process music, as well as for being Reich's first relevant work of genuinely instrumental execution, which allows an analysis of the score itself as a diagram. In *Piano Phase*, the material that constitutes it is the notes of a piano, unlike the recordings of the speeches of socio-political nature (such as those present in *It's Gonna Rain* from 1965 and *Come Out* from 1966). *Piano Phase*, in its conception and execution, expresses just its material and its process. In other words, the abstraction of *Piano Phase* — by not necessarily manifesting an idea beyond one that is strictly musical — becomes suitable to be compared to another equally abstract work, *House II*.

7.House II and Piano Phase

Between 1969 and 1970, Eisenman worked on the *House II* project (Fig. 1 left), a residence of about 180m^2 in Hardwick, Vermont, for the couple Richard and Florence Falk. *House II* consists structurally of a wooden structure system with external coatings of painted wood panels and internal plaster coatings (IZAR, 2015, p.160). In conceptual terms, *House II* is based on what Eisenman himself calls *self-referentiality*, that is, the idea of *"[...] the doubling of a structural system with both a column grid and a shear wall system, either of which would have been enough for structural support"* (EISENMAN, 1999, p.63).

After the experience gained with the composition of the works *It's Gonna Rain* (1965), *Come Out* (1966), and *Melodica* (1966), Reich, at the end of 1966, planned to employ the same type of procedural operation present in these works (*phasing*) in the scope of strictly instrumental music. Reich transcribed the resulting work called *Piano Phase* (Fig.2 on the right) in a score that also included instructions by the composer and in its final stage consists of three distinct sections, each based on specific phrases (Mertens, 2007, p.49).

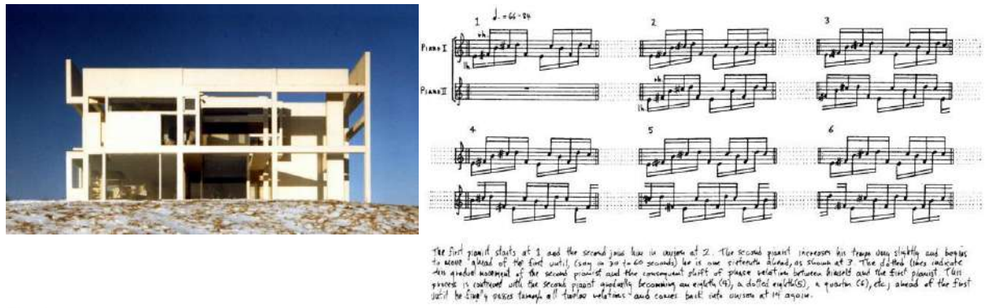


Fig. 1

By presenting itself as an architectural object, that is, static, the *phasing* present in *House II,* even if not replicating the linearity of *Piano Phase*, is analogous with the so-called unstable events that occur between different alignments of the same musical phrase. That is, in the first section of *Piano Phase* (as represented in the Figure 2 diagram), pianist 1 performs an unaccompanied musical phrase (Fig. 2-I) and then pianist 2 performs the same phrase in alignment (Fig.2-II), moreover, through a gradual acceleration of the execution of this same phrase, the *phasing* operation occurs. This operation is continuous, delimiting in this way different alignments between the same phrase (Fig.2-III to XIII) until the cycle returns to its initial state (Fig.2-XV). In *Piano Phase,* therefore

> two types of events arise [...]: those stable, which occur in the reconfigurations of the alignment of the two patterns; and those that occur during the time period of the phasing. For example, when the notes are close to the phasing of half a pulse, a sense of speed duplication occurs. Thus, a wide range of acoustic and psychoacoustic effects occurs, and although the process always repeats the same material, the work always sounds different [...] (CERVO, 2005, p.51).

Fig. 2

As in *Piano Phase*, the so-called unstable events and their ambiguous acoustic effects are apparent, in *House II,* the *phasing* operation and its equally ambiguous implications delimit in the architectural object indications of its presence, described by the diagrams of Figure 3 from 2 to 9. After doubling the cubic volume and *phasing* itself diagonally (Fig.3-2), Eisenman establishes a nine-square grid as a common element of both volumes (Fig.3-3), demarcating in the *phased* volume the points of this grid (columns) (Fig.3-4) and the solids resulting from this organization of points (Fig.3-5). While in the other volume the planes (shear walls) are determined in the opposite direction to the solids established in the *phased* volume (Fig.3-6). The intersection of these elements present in the volumes establishes two spatial reference systems that Eisenman delimit in the final project: from the north, the walls can be interpreted

as neutral elements of which the columns would be formal residues of the *phasing* operation, while in the south the opposite occurs (Eisenman, 1972, p.25). Eisenman formally emphasizes this dichotomy by changing the length of the walls in relation to the grid of *phased* diagonal columns, thus emphasizing the reading of one structural system as a remnant of the other and vice versa (Fig.3-7). This effect is analogous to what Paul Epstein describes in his *Piano Phase* analysis when describing that *"[…] first the impression is of increasing resonance, a change in acoustic quality only. At the next stage one begins to hear the voices separate: echo replaces resonance"* (EPSTEIN, 1986, p.497-499, apud CHRISTENSEN, 2004, p.100).

These *echoes* and *resonances* of which Epstein describes as elements present in the unstable events during the *phasing* operation can be observed in *House II* in the treatment of solids resulting from the nine-square grid's arrangement. Eisenman's staggered approach in the shear walls is also used in the three solids, both in their length, establishing a pattern similar to that of the wall's arrangement as in their height, delimiting the three levels of the upper floor (Fig.3-8). The volumes combination establishes the *House II* final configuration in formal terms, however, Eisenman stresses the *phasing* operation in details beyond those of strictly structural category as presented in the plans of Figure 3 from A to D. Details such as the use of roof skylights (Fig.3-A) and negatives (Fig.3-B), in addition to the extensions on the pillars both on the ground floor, in the north-south orientation (Fig.3-C) and on the first floor, in the east-west orientation (Fig.3-9 and Fig.3-D).

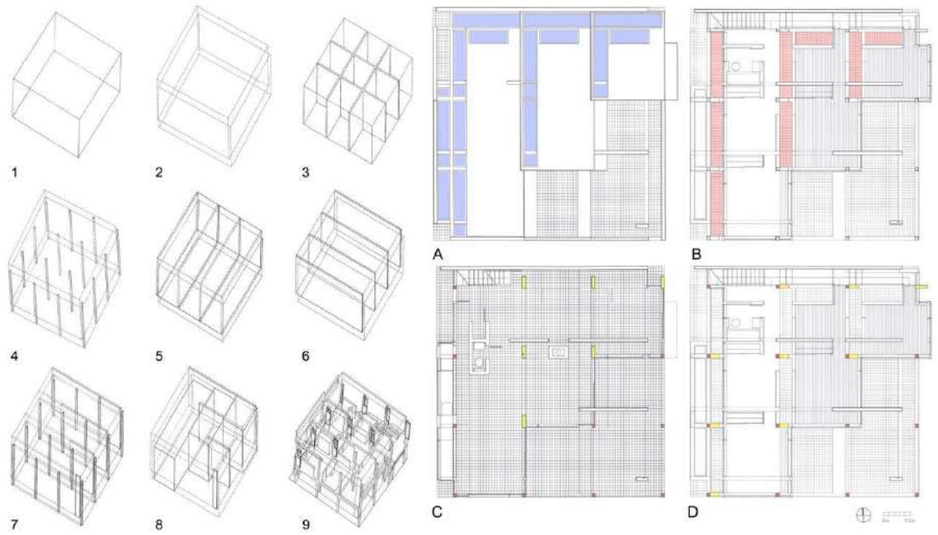


Fig. 3

Taking into account the fact that the two diagonally shifted (*phased*) volumes were organized from a nine-square grid represented in Figure 4-1, Eisenman uses the residual spaces provided by such operation also to define functional aspects of the project. On the ground floor, it is possible to observe that the staircase and counter of the kitchen area/living room were placed in certain residual spaces (Fig.4-2) while on the first floor Eisenman delimits the principal axes of circulation in addition to niches intended for the furniture of the rooms (Fig.4-3). In addition to these two nine-square grids delimiting the arrangement of the pillars and the shear walls, both also delimit particular walls of which Eisenman (as in the treatment of structural elements and solids) employs a staggered approach (*echoes*, *resonances*). This approach suggests a reading of these walls in terms of expansion and contraction (depending on the observer's reference point) of their dimensions (height, width, and length) concerning both the north-south and east-west axes (Fig.4-4) considering the fact that such walls are contained in *phased* volumes, a reading similar to that of the relationship between the shear walls with the columns and the solids.

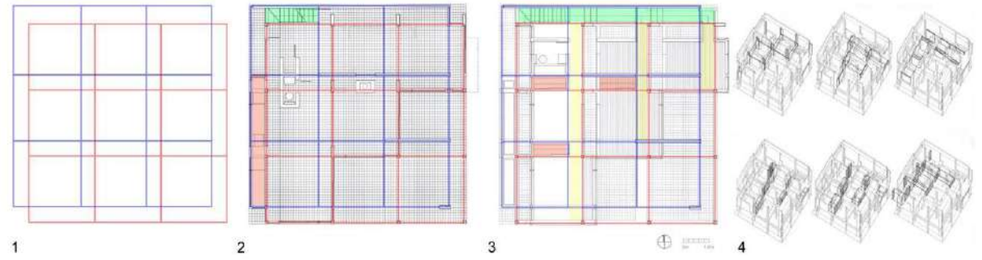


Fig. 4

Together with the strictly haptic (*House II*) and audible (*Piano Phase*) aspects of each of the works described from the *phasing* operation, the idea of the work as a process conceptually (and consequently formally) defines both Eisenman's project and Reich's work. In both instances, "*the object does not attempt to pass itself off as unquestionable, but rather […] lay bare the devices of its own formation […]"* (HAYS, 2010, p.55), whether these are architectural devices (the *phasing* of identical volumes) or musical (the *phasing* of identical musical phrases). In *Music as the Gradual Process,* Reich affirms among the aphorisms that constitute the text that

the distinctive thing about musical processes is that they determine all the note-to-note (sound-to-sound) details and the overall form simultaneously. […]

I am interested in perceptible processes. I want to be able to hear the process happening throughout the sounding music. […]

What I'm interested in is a compositional process and a sounding music that is one and the same thing. […] (REICH, 2004d, p.34-35).

In Eisenman's *House II* the same architectural concerns are noticeable. In other words, Eisenman elaborated a project from which the operation that produced the architectural object (the *phasing*) delimited the relationship of its structural parts (columns and shear walls in particular) and the final form of such object, as well as expressing this same operation with details present throughout the project beyond those of structural order. Consequently, the architecture manifests the operation, as well as the operation manifests the architecture. Also, as elaborated by Moneo

architecture as a process implies a result in which the form is, to some extent, something unexpected. We could say that for Eisenman the results don't matter much. What is sought is not a predetermined project, previously imagined or subject to a model of which one is aware. Architecture is simply the end of the process. (MONEO, 2008, p.148)

Regardless of whether Eisenman and Reich's intention is, the use of operations whose results are apparent to the individual who interacts with a particular work, architectural or musical, this practice's results may suggest elements that are not of immediate understanding. Regarding this fact, Reich argues in *Music as a Gradual Process* that

the use of hidden structural devices in the music never appealed to me. Even when all the cards are on the table and everyone hears what is gradually happening in a musical process, there are still enough mysteries to satisfy all. These mysteries are the impersonal, unintended, psychoacoustic by-products of the intended process. (REICH, 2004d, p.35).

In the case of the *Piano Phase*, the overlap and consequent phasing and repetition of the material used in the work produces *"[...] melodies that are not written in the score and result from groupings of notes performed by listening"* (FERRAZ, 1998, p.60). However, even if Reich claims that the processes (operations) themselves can provide various secrets, such secrets may also include the hidden structural devices of which the composer argues to have no interest. As described by Epstein in his analysis of the first section of *Piano Phase*, the *"[…] second half of the cycle is a retrograde of the first, with the relationship between the two interpreters inverted"* (EPSTEIN, 1986, p.495, apud LANCIA, 2008, p.60), that is, each half of the process (if the *phasing* occurs until the return to the original alignment) is symmetrical in relation to another. Considering that module VIII of Figure 2 in the middle of this first section of the work, it is possible to perceive such symmetry by comparing modules VII-IX, VI-X, V-XI, etc. Regarding this fact about the "hidden structure", Keith Potter states that

any complete and strict phase cycle of this type will, of course, move to retrograde when it reaches the middle. But this is very unlikely to be perceived by the listener: an illustration of how even a purely mechanical process hides 'secrets of structure' (POTTER, 2000, p.184, apud LANCIA, 2008, p.60).

Concerning Eisenman's *House II*, it is possible to identify a similar phenomenon. If the operation applied in the project is apparent due to the elements already described, the spatial experience of the work (and consequently of other Eisenman's projects) by the individual suggests characteristics not necessarily elaborated by the architect in a first instance (EISENMAN, 2013). Simultaneously with these consequences, the *phasing* operation applied in the two volumes that make up *House II* also denotes an implicit structure. Considering that both volumes were organized from the nine-square grid and *phased* diagonally, if the axes of the grids in the volumes are prolonged and interconnected in their limits, a symmetric pattern of the ABABABA type is clearly noticeable and represented in the diagram of Figure 5-1. From this pattern, one can then deduce the general proportion present in the project with a secondary grid, whose insertion in the existing one establishes an alternation between modular configurations of 1:1, 3:1, and 3:3 in a grid of 13:13 (Fig.5-2). Therefore, the presence of number 13 in this project, refers to Rowe in its comparison between Palladio's *Villa Malcontenta* and Le Corbusier's *Villa Stein* (ROWE, 1978, p.11) (Fig.5-3). Both projects have modular ratios of approximately 8:5, numbers that, like 13, are part of the Fibonacci Series (1, 1, 2, 3, 5, 8, 13, etc.) and whose division (1.6) results in a value close to the Golden Ratio (approximately 1,618).

From the insertion of this 13:13 grid in the plans, sections and, elevations of the project, it is possible to perceive how this grid delimits more accurately the arrangement of the elements that constitute the *House II* project, represented by Figure 5, in diagrams A to D. In the floor plan the secondary grid marks the arrangement of the area dedicated to the toilet and a small service room, together with the horizontal movement axes (Fig.5-A). On the first floor, this same grid delimits the negatives (Fig.5-B), whose layout is also apparent in the roof skylights (Fig.5-C) in addition to the area related to the rooms and offices since these are all interconnected (Fig.5-B). In the elevations and sections, this grid is also apparent, establishing axes of the various fenestrations of the project and the separation between its volumes as well as the interruptions of the slabs (Fig.5-D).

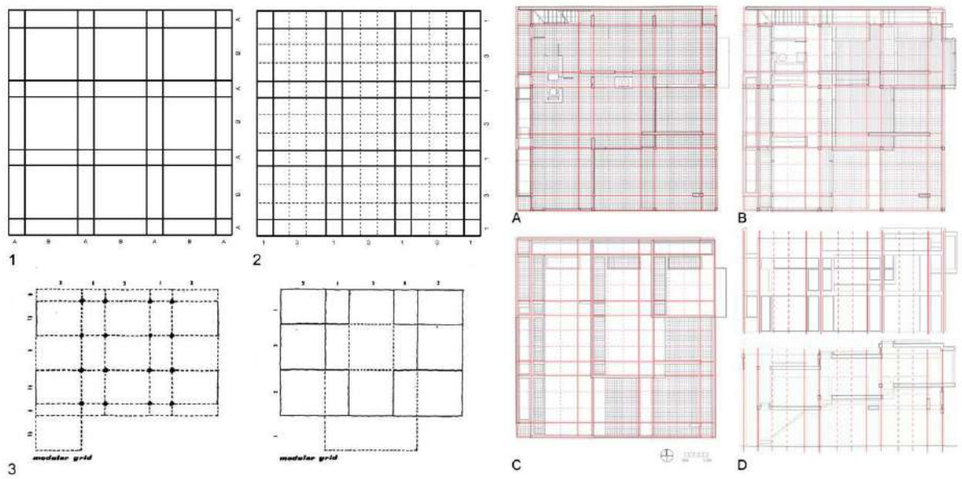


Fig. 5

8.Conclusion

Like all relevant research, initial hypotheses are just the starting point. They are intuitions[4] not yet brought to the field of intellect or concepts. In this case, our hypothesis was that analogous phenomena can co-occur in different disciplines, and that, when we understand that varied productions are coming from similar interests, the knowledge about these same productions would not only become broader but would show that, regardless of the disciplines in question, they work at their core with *ideas*.

In the study now presented, Eisenman's work covert characteristics came to the fore demonstrating a certain geometric rigor present in tectonic aspects that, however, go beyond hasty interpretations. If it was not initially the research's objective to point out qualities in the comparative works, in the sense of a judgment of values, these qualities presented themselves, enabling readings beyond those already established initially. However, the characteristics brought to light in Eisenman's *House II* due to the approximation between the compared works, establish a field that *"subordinates the description of space to functions of thought"* (DELEUZE, 1990, p.34). Likewise, this field subordinates the fruition of a musical piece to functions of thought.

The defamiliarization strategies employed by Eisenman (Hays, 2010, p.55) can, in this field, be compared to Reich's strategies, which, by subordinating musical composition to thought functions, also defamiliarize them. Both address their work with some distance. It is in this sense that the *Uncanny* idea serves as an articulation of meaning for the analyzed works, considering that *phasing* is a destabilizing operation in both *House II* and *Piano Phase*.

Finally, the concepts presented together with the methodology used do not end in themselves, they can provide instruments whose use can be made when approaching other works subordinated to thought functions.

To bare the thought functions necessary to describe such works is to reconcile our familiarity with these works.

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Notes

1 The *Uncanny* is a concept developed by Anthony Vidler between 1985 and 1990, later presented in his book *The Architectural of Uncanny* (1992). Vidler, from Sigmund Freud's article *Das Unheimlich* (1919), proposes a reading that relativizes the known and familiar with the strange. For Vidler, *"the uncanny found its metaphorical place, as expected, in architecture: first in the house [...]"* (VIDLER, 1990 in NESBIT, 2008). *Uncanny* allows an aesthetic reading of contemporary architectures. We propose extending it to the discipline of music, however, diverting some of its subjective reading to operative aspects of the examples discussed here.

2 In 1944 the seventh volume of the *Journal of the Warburg Institute* featured an essay by Wittkower entitled *Principles of Palladio's Architecture* whose second part, *Palladio's Geometry: The Villas*, contains a set of 11 diagrams of *villa* floor plans designed by Palladio, all based on what Wittkower argued were variations of a nine-square grid. Until its inclusion in Wittkower's 1949 book *Architectural Principles in the Age of Humanism*, *Principles of Palladio's Architecture* was read by a group of young British architects that in the post-war period became influential, such as the couple Alison Smithson and Peter Smithson, Reyner Banham, Alan Colquhoun and in particular Colin Rowe (VIDLER, 2005, p.76).

3 Based on Wittkower's analyses delimited in *Principles of Palladio's Architecture*, Rowe publishes in the March 1947 issue of *The Architectural Review of London* an essay entitled *The Mathematics of the Ideal Villa*. Using what he calls "analytical diagrams", Rowe compared the grid used in Palladio's *Villa Malcontenta* and Le Corbusier's *Villa Stein* concluding that both *"[...] exhibit (and conceals) an alternating rhythm of double and single spatial intervals; and each house [...] displays a comparable tripartite distribution of lines of support"* (ROWE, 1978, p.4). In other words, both *villas* have a geometric matrix, a variation of a nine-square grid.

4 For Kant, *"[...] what as representation can precede the action of thinking something is intuition and, if it contains relationships, it is the form of intuition."* (KANT, 2009, p.48).

Image Captions (Diagrams: Felipe Ferla da Costa)

Fig. 1. Left. *House II*. Right. Excerpt from the *Piano Phase* score.

Fig. 2. *Piano Phase* Diagram

Fig. 3. Left. Diagrams of *House II*. Right. *House II* plans

Fig. 4. Left. Diagrams of nine square grids. Right. Diagrams of walls in *House II*.

Fig. 5. Left. Resulting grid from *House II* and grids from *Villa Stein* (left) and *Villa Malcontenta* (right). Left. Resulting grid inserted in the plans, section, and elevation of *House II*.

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Biography

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Against Analogy.
Understanding Through Creation: The Role of Scale Models as a Means of Architectural Research

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Abstract

The imaginary building that we as designers picture in our minds will not be transferred to the paper as planimetric representations. The drawings and scale models will not be transferred to reality as a material building. Each entity is different and separated in time and space from one another. Each one has its own characteristics and ways of being. Typical design processes use analogy as a force towards an unachievable ideal: drawings seeking to grasp the ideal imaginary building; buildings trying to reach the condition of the ideal plans. Similarly, typical research processes also use analogy to keep linked study cases to the very research development. This paper aims to present and defend a hypothesis against analogy: that in case-centered research it is only through the abstraction of creation and only by understanding the own creation that is possible to understand, by a reverse analogy, the work of architecture. Analogy ceases to be an inner active force, but just an outer consequence. Instead, there is an ontological force that appears playing an active role, turning every step and every product of the research into a work in itself, detached from its original objective. This paper intends to discuss a research method based on an empirical approach by presenting a series of scale models, the procedures to build them and how each model is capable of revealing through ontology the ways by which each part of the work was conceived, designed and built. The role of scale models in architectural research is still to be discussed.

Key words: Situation-objects, Anagogical Models, Fiction, Abstraction, Architectural Design Research.

1. Introduction: a brief attempt to understand the nature of architectural design research.[1]

Rachael Luck recently published an article that extensively reviews the recent evolution of the understanding of “what architectural design research entails.”[2] She suggests that architectural design research (ADR) implies an empiric, inductive, constructive and generative practice-led method whose products become the source of knowledge that may be then theorized upon. Such a method would be the very method used by practitioners and taught in architecture schools. This leads to the dilemma of considering architectural design as ADR.

In 2014, I suggest that “the imaginary building of the work of criticism *is* the real building of the work of architecture.”[3] In a chronological perspective of the creative process, it means that the work of criticism tends to the work of architecture, because the work of architecture had previously tended to the work of criticism. As a geometric coincidence situation between two lines, there is a sense of a fusion between two entities. On one hand, work of criticism becomes the fusion between the real building and the imaginary building produced within the very process of criticism. On the other hand, the work of architecture becomes the science and experience of that fusion. The notion of work is understood here is an archetypal entity beyond its real components, and criticism has the attributes of a case-centered research. The point is that it seems that architectural design and ADR could be understood as the two opposed directions of the same line. The task is, then, to define that line.

As Luck concludes, repeating the same conclusion by Yasser Megahed two years before,[4] there is yet no consensus about the nature of ADR. Since it was born just 40 years ago with the claim of design as a discipline,[5] research in architectural design grew as a practice-led research, trying to be detached from the traditional forms of research in architecture related to the scientific or humanities paradigms. But it was just 20 years ago that ADR began to be accepted as such with the independence of Arts and Humanities Research Board (AHRB) in the United Kingdom. Nevertheless, a few years later, the AHRB concluded that “[n]ot all creative activity and practice, even of the highest quality, constitutes research, and much research in the creative and performing arts involves no such activity at all.”[6] Maybe, the difficulty on trying to adjust research and creation reflects its own impossibility. Or, maybe (and this is the point of this introduction), the similarities of research and creation is not posed in their products, neither in their process, procedures and methods, but in the mediums used to carry out their process and achieve their products. In Architecture, despite other disciplines, the use of two and three-dimensional representations in order to define a project that will possibly be materialized as a building is inextricable from its practice. That is to say, what architects, being practitioners or scholars, inevitably do is to represent through drawings and models. That is the line that combines research and design. If representation through drawings and models is a part of the nature of architectural design, then it is also a part of the nature of ADR. Yet representation is not everything, especially for research, it is fundamental.

Now, what differentiate both? What characterizes each opposed direction of this same line which is representation? Despite the previous hypothesis on the importance of representation, Megahed defines other three key (*sic*) characteristics for ADR: “its saturation with tacit architectural knowledge; the iterative nature of its processes; and a commitment to reflexivity on the part of the researcher.”[7] The first characteristic refers to the extension and exhaustion of a research regarding its subject. In the case of ADR, the subject is, following Megahed, a tacit, implicit, knowledge, which research seeks to make explicit. That is the case of case-centered research, which focuses on one single work of architecture. The second characteristic reinforces the iterative, persistent, nature of design, now reclaimed by research. And the third one pays attention to the necessity of rigor and systematic observation by the researcher that must be focused on the understanding of the processes of constitution of the subject, that is to say, a work of architecture, which seems to be the common element of Megahed’s definition. With that, we may say that in ADR the presence and reality of a work of architecture precedes the very act of research. In turn, in design, the work will be present after the consummation of the process. This assertion could be taken as a simple chronological situation.

Concluding this brief introduction, if ADR develops itself towards the creation of a previously nonexistent work, it will probably lack Megahed’s third characteristic: the effort to be conscious of every own decision. Since creation works through heuristics, it is improbable to achieve the necessary explicit explanation of its own process. However, if research leaves the desire to create as in a common design process and focus on operating with the iterative, speculative and exploratory nature of design now towards an exhaustive understanding of the processes of constitution of a real pre-existent subject, it seems that architectural design and ADR could start to benefit from one another.

2. Analogy and abstraction

To think analogically means that there must be a bounding force keeping together two entities that resemble each other. One is, in some way, inaccessible; the other is the medium to access the first. The first, however, is known beforehand, that is, it was once physically accessed or it is real mentally. In either case, the nature of the entity is known. The second entity is an attempt to grasp that existence and knowledge intrinsic to the first one. That is its horizon. Since it is unreachable, yet known, it becomes

necessary to create, point by point, a counter-reality: an accessible resemblance of it. In the words of social scientist Howard Becker: one “sees a phenomenon in a context that appears to be similar to something one knows better in another context.”[8] Then, one *pretends* that two different entities are correlated. It is through this process of mirroring and increasable indirect nearness that analogical thinking takes place.
Once that bounding force ceases to exist or ceases to be evident, as a consequence of the independence of one entity from the other or, in the artistic sphere, when there is an act of will of cutting or hiding –or protecting– the link, occurs abstraction. Abstraction is, then, the act of untying two related entities. It is for this reason that a single entity cannot be labeled as abstract, unless in comparison to other similar entities.
Natural abstraction occurs in the evolution of species. Every specimen is a continuity and a disruption from its predecessor. In human species it leads to existential dilemmas: I am and I am not my father. Or to remember the exasperation of a character by movie director Nanni Moretti before crashing his car: “we are all the same, yet ¡we are all different!”[9] We are all an analogy that we don’t want to be, we may say. A paradigm in art abstraction is the sculptural series of Constantin Brancusi. Without being afraid of figuration and imitation of natural forms, Brancusi seems to try to possess them through mimesis and subtle variations, in the sense of Aristotle’s notion of *poiesis*[10] or of George Steiner’s serious active interpretation.[11] There is a process of appropriation of reality by persistence and multiplication. Yet, within the same process, reality continuously gets less and less evident, until it completely ceases to appear, when the authority over that fragment of reality is total. That is when a kiss gets to be confused as a mere metaphor of two semicircles inscribed together in a prismatic stone block. Nevertheless, in the case of Brancusi, the word –the title of each sculpture– is placed as the vestige of abstraction. In his sculpture *The gate of the kiss* (part of the series *The kiss*), for instance, its name leads to imagination and, therefore, active contemplation: somewhere in this work that I am experiencing it has to be a kiss or the act of it. Otherwise, would be improbable to infer abstraction and the sculpture could keep living, in terms of Rafael Moneo, in its complete and radical solitude, master of its own.[12]
In architecture, an exceptional case is the work of Germán del Sol. Del Sol operates in a very different way compared to Brancusi. He does not persistently transform his external motif, but keeps it almost intact through an act of transposition. Del Sol keeps, for instance, the measurements and proportions of a Mayan staircase and loyally replicates it in a new context. He takes, from observation, the colors and which objects they are applied to, and does the same. In his Hotel of Larache, there is also a series of objects, now with subtle variations, replicating the modules of Brancusi’s Infinite Column.[13] And yet, there is nothing as a figurative impression from his buildings, since his motifs were already the results of processes of artistic or cultural abstraction. By combining them in a completely new context, which is not the place but the building itself, the figurative transposition becomes actual abstraction. Del Sol is the extreme case of abstraction without a process that leads to it.
With those examples, we may say that for abstraction to occur it is inevitable analogy to exist. Analogy opens the possibility of abstraction. Without it, it would be probably just geometrism or minimalism. Abstraction is, therefore, the temporary and apparent interruption of a living analogy.

3. Analogy in architectural scale models

Architectural models will not be buildings, but they *wish* to be: they exist “as desire –in a kind of atopia, if not utopia”, says Christian Hubert.[14] Models and buildings are constructible things. They need, in order to exist, to be constructed. In the case of buildings, they are collective constructions, a distinctive feature of architecture. In the case of physical models, they are, similarly to sculpture, painting, literature and music, personal constructions. Buildings need a huge collective effort, while models do not. In any case, buildings and models imply construction. Building construction, however, is better known than model construction: it is a known craft and discipline, while architectural model construction, –it could be argued– is not known as a craft and absolutely not known as a discipline (if it could ever be a possibility). If there is a process of construction subjacent to buildings as well as to models, then the construction of models could be similar to that of buildings. That is to think analogically. This conditional sentence means that we take our understanding of a particular situation to understand another.
In a well-accepted general definition, Patrick Healy affirms that the notion of model means “an artifact such that its parts, their relations and its working are suitably analogous to some other system.”[15] But what happens when an object is taken, merely by resemblance, as an architectural model and, therefore, related to a building? What happens when a resemblance is just visual and, therefore, there is not a vector from an apparent model to a possible building? What happens when a thing taken as a model is not a model at all? How to understand it in its radical solitude?
To start, we may ask what does influence an entity that may be taken as a model *of something else*? If someone constructs an object made from four vertical sticks and a horizontal plane above them with such measures that can be comfortably used to pose a glass of water, then it would be improbable not to think of a table. Analogically, it would be improbable not to think of a house from an object with two superior inclined symmetrical planes or of a skyscraper from a block whose height is much greater than

its length and width. We have embodied cultural images. Our first confrontation with reality is through putting it in relation to our knowledge and experience, that is, through analogy.
Avoiding the fact that everything is related, since it is well accepted that everything that exists irrupts with the big bang and, for that, everything is made with the same components, how to understand something in itself? This task would lead –I guess–, as suggested by Fernando Pessoa, to pure contemplation: to understand something is to contemplate it, is not to think about it, is not giving it names, is absolutely avoiding language: “to think is to be sick of the eyes.”[16] Saying *model* inevitably creates a model: an analogical hierarchal situation between two things, where the thing called *model* becomes an incomplete image of the other taken as the referent. Analogy deflects our attention to a general easily understandable image. We enter, then, –and probably live in– a world of empty metaphors, claiming, paraphrasing Healy, that we know things in themselves, when these metaphors do not have any correspondence to them. Saying *model* means that “we abandon the singular, completely individualized original experience.”[17]

3.1. Reasoning from the House on Jean Mermoz

During the course of my PhD dissertation,[18] I have made, recorded, described and represented a great amount of *objects* constructed in a time span of three years. The case study, defined in advance of however to approach it, was the House on Jean Mermoz (1956-1961), by Fabio Cruz Prieto from the Valparaiso School. During the process, no readings on the topic of models were made. And, regarding the case, just the writings in historical documents were read by transcribing them. The process of research is, therefore, defined by the specific case, with no protocol. But, in order to be fruitful, there were three basic principles: 1) all of the efforts in making research objects must be directed to the actions that made the building possible; 2) research objects must operate through anatomy, dismembering and materializing fragments, parts and components; and 3) they must be multiple and variable, made from an iterative process of making the same again and again, yet in a different way.
One of the first objects I made, after some improvisations, was a combining group of structural parts (Fig. 1): identical triangular pillars, seven in the first level, six in the second. Why one less? In the structure, all pillars are placed according to an orthogonal uniform grid, creating squares. They are at their vertices and centers, defined by the two diagonals of each square. In the first level, if we try to complete two juxtaposed squares with pillars, it would need eight. It is possible, then, that one of the pillars was removed. And, as a consequence, the diagonal was made evident. In an analytical sense: the removement of one pillar from the first level explains the removal of another pillar from the second level in relation to the first, and can be taken as a projective strategy to emphasize the diagonal as an important façade. (It is through this diagonal that the future building will be accessed and the main corridor will be placed, outside the main structure.) Also, the removement of three pillars from a complete group of two squares in each level results in the number thirteen. With the number seven, of the first pillars, there are already two prime numbers involved in the process.
The orthogonal beams align themselves to the cathetus of the pillar and the first diagonal beams, to the hypotenuse. What about the other diagonal beams that reach frontally the hypotenuse? What is their alignment? Axially to the center of the pillar would be a first guess. In turn, the reinforced concrete slabs were made originally from wooden formwork. All of these formworks were constructed from groups of triangular modules made of one by four inches boards. There were slabs made from one single module, from two and from for modules. Each module was handmade from raulí wood sticks, and then glued together to form the slabs. With a four-modules slab in hand, trying to place it inside the corresponding void, if the second diagonal beam is placed axially to the center of the pillar, the slab does not fit the space. The beam needs to be displaced. Here there seems to be another strategy: by defining a group of beams that escape the rule of alignments, the structural system can adapt itself to chance: an open system. By making the whole two-levels structure with its slabs made of wooden sticks, it was possible to finally see the peculiar formwork design from above.



Fig. 1

Another object, constructed a year later, was a result of the attempt to make a 1:10 structure. With this size, it would not be possible to work with glued sticks. It will be needed to work with carpentry techniques. For that, I needed to take myself an introductory course to acquire some practice. Having made a complete group of slabs, stick by stick, it seems to me that to replicate that long and careful process would lead to no new conclusion. So, I decided to construct the structure with pillars and beams only. Pillars were easy to make: strips of wood through the circular saw. Beams have different endings due to the alignments with pillars. This condition implies that almost all of the beams, despite the fact that they fit a uniform grid, have different sizes. I would need to cut every beam one by one, end by end. But, if it is the case, how would I assemble the beams to the pillars? The result would be very similar to the previous 1:50 object. After a series of attempts designing possibilities of joinery, I decided to create and construct a third (or fourth) structural element: the structural knots, detached from their respective pillars and beams. The section of the pillar was, then, expanded to the beams. For the execution, an octagon concentered with the pillar was projected. As an imagined consequence, by removing the ends of the beams, every orthogonal beam and every diagonal beam became identical: all variations were taken and materialized in the knots. Finally, this operation allowed us to see and touch each knot, which fits the palm of the hand. Besides, it was possible to observe that every knot was different to each other, with the exception of two: a tween knot. Another single movement that gains meaning from the previous single movements of removing a pillar.
The construction of these sets of objects allowed me to understand the way of becoming of the House on Jean Mermoz, which implies becoming aware of the general strategies and specific operations carried out to design and materialize the work of architecture.

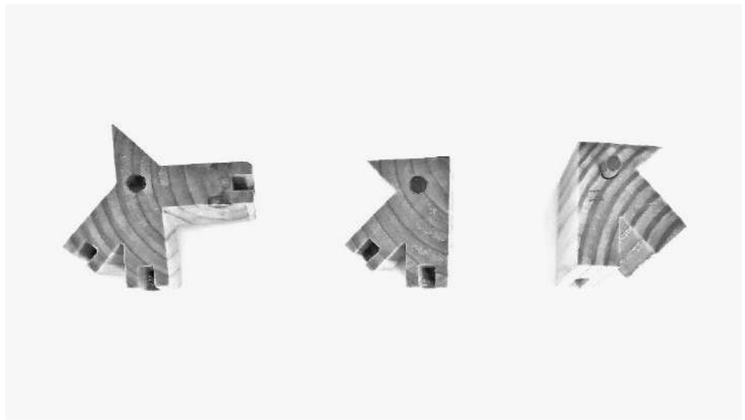


Fig. 2

4. Fiction

When Levi-Strauss remarks that “the power of the small models lies in the way it makes up for a lack of sensual dimensions by an increase in intellectual dimensions,”[19] he is presenting exclusively the notion of model as a relative dependent entity. Taken from the perspective of constructible objects, Levi-Strauss assertion confuses the problem of understanding models in their particular features. The sensual dimensions of the thing called model are not less, because they are not to be put in comparison, than that of a building. They are of different kinds. There is a sensual experience of models as there is of a building. Also, it is through the sensuality of things that intellectual dimensions can be grasped. Sensual and intellectual dimensions are interdependent systems.
Yet, the confusion about the nature of models –due to a probable lack of training– is a common ground. We can read or infer it in almost every book and article on the topic. Topalovic, for instance, says that besides models claim an autonomous objecthood, “this condition is always incomplete.”[20] For her, the reality of the model is an ambiguous one, neither itself nor its referent.
Besides the misinterpretation, Levi-Strauss has a point: small objects fascinate us. As said by Karen Moon, building miniatures captivate, “just like a dollhouse, because of the satisfyingly perfect and complete world it presents the viewer: a world that allows absolute manipulation and control.”[21] When its size fits the palm of the hand and it is made with care and precision we take them as jewellery-like objects. When they remind us of a personal moment in a particular place, we take them as a souvenir. Souvenirs are an interesting issue since they imply the notion of miniature and replica, and do not require perfection. They are a nostalgia device that triggers our memory. They are, therefore, as said by Mindrup, an allusion, not a model.[22] With that, it seems to be acceptable to say that if an object leads us to an imaginable situation, which seems to be similar to when an object causes us to think of another object, that is, when it creates an analogical situation, then the first object, as a device, would not be consider a model. Are, then, analogical models *models* at all?
As constructible objects, models imply a manual process of constitution by the manipulation of materials. With the exception of digitally made models materialized by means of a machine, such as a 3D printer, a CNC router or a laser cutter, physical models ask for hand dexterity, that is, intelligence gained through persistent practice, the *thought of the hand*, in the terms of Oswald Spengler,[23] with its own instruments: our fingers. The word finger comes from the Latin verb *fingere*, originally meaning to mold, especially clay, and therefore, to give form to a matter originally formless. In Spanish language, *fingere* led to *fingir*, meaning nowadays to imply something that is not true or to act like you mean it when you do not, that is, to pretend. It became a synonym of falsehood and forgery. This leads to a parallel situation: in English *to forge* means both to falsify and to shape the iron. In both cases, fingering clay and forging iron, the result of the process of material formalization by means of hands and fingers were called fiction. Fiction was, then, the craft of the blacksmith and, particularly, of the potter. It did not have anything to do with the notion of the unreal. It was the most realistic human activity. How the notion of fiction illuminates the understanding of models? Fiction emphasizes the prior presence of materials, which is inextricable from the nature of models: architectural models are material entities. Fiction, in order to exist, reinforces the need to use our hands and fingers to give materials form and, through this very process, really understand them, that is, embodying them. Models, in order to become fiction, which means real and formed, need to be manually constructed. Fiction, also, stresses the own reality of the model, that which we are trying to grasp.

5. Models as models

Says D. Graham Burnett that “on the one hand, models can create a situation in which you may reason analogically about the nature of things; but on the other hand they can cause to be made manifest –and hence allow for the revealing, touching, tweaking, or accessing of– the actual forces and stuff at issue. [...] [Y]ou are, somehow, ‘breaking through’ to the very nature of things.”[24] The two possibilities descript by Burnett lead, almost without interpretation, to two categories of architectural models: analogical models, as we have seen so far, and ontological models. The first could be defined, at this point, as a kind of physical tridimensional representation which is employed as a medium and a reflected image to understand or to project another thing, for instance, buildings and projects. This category inherently implies the presence of language: it is necessary that the relativity of the notion *model* affects the impression of the situation; it is necessary that words create general and hierarchical distinctions and correlations between things: *buildings* implying *projects*, *models* implying *buildings*. In this category, models are an excuse to see another thing which is not present, but insinuated. Therefore, models are not the target or goal neither of the very task of making them nor of the observation. The second category, in turn, is compounded by a particular kind of models when they disassociate themselves from their condition of representation –when abstraction occurs–, becoming the very object of attention, whose qualities may coincide with the qualities of a future possible building. In geometrical terms, in analogical models there is a relation of similarity between the representation and the represented, while in ontological models there is a relation of coincidence, that is, from just a single point of view and a specific moment, the separation between the representation and the represented ceases to be

perceived. In the words of Burnett, “[when] the thing that you decided to model is nothing more nothing less than the thing that you just build as a model.”[25]

With ontological models the problem ceases to be the represented –a building or project– and becomes the very representation deprived of its representation status. The model ceases to be a model and converts itself in an object of independent existence. (Better than that: the model recovers its own independent existence by denying and overcoming its idiosyncratic analogical status.) Its nature and the character of its construction are such that the representation –the model– carries the same qualities of the represented. The knowledge achieved from the observation of the final constitution and the process of constitution of models is, then, linked to themselves and not as a bridge towards the represented anymore.

Models, taken as tridimensional representations in their analogical status, present a very interesting case of infidelity. As said by Úbeda Blanco, models offer very little space for abstraction.[26] In other words, tridimensional representations tend to figuration which is purely visual. It is well known by practice that the ways of constructing –that is, the origins of– an architectural scale model and a building are almost unrelated. So, by taking a model as a mechanism of projection of a possible future visually similar yet structurally different reality we are incurring necessarily in a high degree of infidelity.[27] The act of projection is, then, unfaithful to its original reality, which is the reality of the model, with its qualities and ways of becoming. The development of projection resides in a reality to which it does not want to belong, since it yearns for another: the reality of the building. Only by putting in comparison, models can be taken as an unfaithful mechanism. Nevertheless, to recover its own reality, models must embrace and strengthen this disloyal condition to its highest degree, when they finally can be alone.

Ontological models can only talk about a building because they talk about themselves. Only insofar as the observation is made on the model itself –without naming it *model*– and its constitutive processes it can refer to something else by analogy. The conclusions are, in fact, from and about the model. Mindrup offers an interesting proposal on the understanding of models by discussing the notion of anagogy.[28] The term, originally used in a mystical sense of spiritual elevation, refers to a force that triggers an imaginative transposition from a material to an immaterial reality. From it, the author proposes the notion of anagogical models, a kind of model that is not made as a model in advance, but, due to anagogical interpretation, could be taken as an excuse for a possible building. Anagogical models “are not fashioned according to a prior idea but are found in the critical assemblage of the modelling materials.”[29] That is the case when Sennett writes that all the efforts of the craftsman “depend on curiosity about the material at hand.”[30] In an anagogical model, materials come first, and their particular character leads the way that they can be manipulated, defining appropriate sizes, scales, general techniques and particular procedures. Yet, we argue that any of those variables can be the starting point of an anagogical model. Once one of them is determined, it will create the chain of restrictions for the others. The essential feature of anagogical models, as put by Mindrup, is that they are taken as a record of its process of constitution, not as a finished object. And it is by understanding its process that some practical strategies for material manipulation can travel from the model to the process of materialization of the very building.

Another insightful concept is Foucault’s idea of situation-objects briefly explained by Healy.[31] In contrast to figuration-objects, which try to embrace an external appearance in its totality, situation-objects seek to capture an instant, as a photograph. It is a partial fragment of another object. From this idea, it can be said that situation-objects imply an operation of architectural anatomy. In order to fully understand a subject, it is necessary to dismember it, showing every component, piece and sector separately, and all the possible arrangements with them. Time is also a variable: situation-objects may show every stage of the constitution of the whole and every part of the subject. As well as in an anatomy study, architectural situation-objects present the building as that which is not. A radical difference takes place to such an extent that total abstraction occurs. The infidelity feature of models is reversed here to a deep fidelity to the possibilities of construction of its parts, that is, a fidelity to its anagogical aspects. Situation-objects can be assimilated in architectural design research as a strategy to overcome the representation status of models by faithfully presenting the work otherwise.

Reasoning through *models* (which means reasoning through analogies), however, does not lead to guaranteed knowledge, but, as sustained by Howard, “something more valuable and less ephemeral: a collection of researchable questions linked to each other around a set of related phenomena.”[32] That is the true value of analogy.

Notes

1 This article is a result of the research project “Fenomenología de la maqueta de arquitectura: la experiencia abstracta de los procesos de proyección y edificación hacia el entendimiento de la obra”, developed with team members León Duval Cortínez and Renata Tobar Nilo and financed by the Concurso Anual de Investigación (CAI) from the Universidad Finis Terrae.

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Image Captions

Fig. 1. Series #1. Above: complete main structure, raulí wood, 1:50 + 1:100. Below: only pillars and beams, raulí wood, 1:50. Author: Igor Fracalossi.

Fig. 2. Series #2. Structural knots, pinewood, 1:10. Author: Igor Fracalossi.

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Biography

Igor Fracalossi Professor and researcher at the School of Architecture of Universidad Finis Terrae. PhD in Architecture and Urban Studies, Pontifical University of Chile (2018). Master in Architecture, Pontifical University of Chile (2012). Architect, Federal University of Ceará, Brazil (2009). He has published articles and participated in seminars in England, Turkey, Spain, Brazil, Argentina and Chile. He received the first prize of the International Architecture Biennial of Argentina for an essay about the House in Butantã by Paulo Mendes da Rocha (2014). He was granted a MIT-Chile Graduate Student Seed Fund (2017) on the topic of fiction architecture and storytelling. In 2019, he was selected in the Annual Research Contest (Concurso Anual de Investigación - CAI) from Universidad Finis Terrae, with the project ‘Phenomenology of Architectural Models’, from which this paper is a result. His main interests are model-based and case-centered empiric architectural research methods, focused on modern architecture. He is the coordinator of research and theory at the School of Architecture of Universidad Finis Terrae.

The Dialectics of National and International in Oscar Niemeyer’s career: on his connections in the United States of America (1938-1947)

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Abstract

Oscar Niemeyer (1907-2012) had a recognition erected around national and international experiences. Niemeyer’s work has its uniqueness not only due to immanent qualities of his architecture but for the shaping of a reputation that had sustained his central position in the field. It is still necessary systematic bibliography that connects his recognition with his foreign works. Travels, contacts, and experiences of Niemeyer abroad were opportunities for the formation and consolidation of his protagonism.
Studies on the architect usually bind these National and International practices based on blunt formalist casuists, overlooking the sophisticated dialectics Niemeyer has established between National prestige and International recognition.
Oscar Niemeyer went to the USA in 1938, to work on the final design and building of the Brazilian Pavilion in New York’s World Fair, with Lucio Costa. Niemeyer himself set there several connections that collaborated to build his role as champion of Brazilian Modern Architecture. This reputation has served him in his homeland to equally surpass bureaucratic idiosyncrasies as he developed remarkable works during the 1940s: Pampulha Complex and Centre of Technology of the Air Force.
While working abroad in the 1940s, Niemeyer joins the UN Headquarters all-star team and is finally graced in 1950 with Stamos Papadaki’s monographic book. Due to this work on two fronts, he enters the 1950s with a full seal of recognition as the central name of Brazilian Architecture.
How are national and international efforts intertwined in Niemeyer’s work? By exposing aspects of these dialectics, new critical material is gathered to shed light on the legacy of this protagonist of the History of Architecture in the XXth Century.

Keywords: Oscar Niemeyer, Brazilian Modern Architecture, Modern Architecture, Brazilian Modern Art, North-American Modern Architecture

Oscar Niemeyer retains the position of a prominent individual figure in 20th-century Brazilian Architecture. This sense of uniqueness was not sustained only on the grounds of Niemeyer's works within the scope of the categories of analysis of architecture. His trajectory had a series of factors such as good dispositions, opportunities, and context. Durand and Salvatori (2013) enounce the sociological contours to the enthronement of Niemeyer's *persona*, demarcating his social circle and how it helped to amplify the scope of his work: “His career started at a young age, driven by such favorable circumstances that placed him definitely above any other Brazilian architect in terms of public visibility and professional prestige”[i].

The historical scrutiny of the links of his work and reputation is still full of gaps, despite the extensive range of works available on the architect. Durand and Salvatori have focused on the ideological construction of an alleged authenticity in the elan between artist and work: “artist as an exclusive product of his work, which makes no concessions to money and subordinates 'values of art' to more relevant human values ”[ii]. This interpretation resonates in Durand’s well-known *Art, privilege and distinction*, in which it is pointed out that Niemeyer’s dominance came from a good relationship with the State, stating an understanding of the architect’s career as indissociable to his public commissions in Brazil. However, this thesis fails to accredit his career also to the formidable network built abroad, being seeing either as a lucky event or a consecration of fame first built in Brazil. Niemeyer kept building abroad during all his professional life, not as a result of an ongoing well-managed trajectory, but more as part of this very process of consolidation as the main name of Brazilian Modern Architecture.

The state of the art of researches on Niemeyer shows only fragments of this international history. Segawa published in 2014 an analysis of Niemeyer's international contribution focusing on the 1947 experience at the United Nations[iii]. On studying large-circulation magazines like *Time Magazines* Segawa shows how the reception of the Brazilian architect's proposals wasn’t always well accepted in the country. The article suggests that Niemeyer's connections abroad faced oppositions similar to those in his country of origin, however, filtered by distance and by the skillful management of his foreign trajectory as a legitimizer for his national production.

Rossetti in 2018 started to connect foreign-built career and reputation: “Niemeyer builds a systematic mythic discourse, similarly reinforcing the character of a character who, like Ulysses, moves out of his place, moves, goes through clashes - and establishes new conquests, then heroically returns to his point of departure"[iv].

There is a bibliography on some of the author's remarkable works abroad, such as the Mondadori building, the French Communist Party, and others, but no extensive, archives-based, enduring, broad and systemic study has been made on the ties and networks that made these works feasible and realized. In addition, a lot of recent bibliographies shows how the absence of Niemeyer from Brazil between the 1960s and 1970s increased the task of collaborators and eventually questioning the full authorship in his works made in Brazilian lands[v]. On the other hand, as the architect got more commissions abroad more authority it gained to overcome idiosyncrasies in Brazil, reaching a unique cultural capital that made possible his enthronement as the champion of Modern Brazilian Architecture.

Bourdieu enunciates the consolidated understanding in the field of art history of the interdependence between networks built by the author and the apprehension and elaboration of his work: “Few areas demonstrate the heuristic effectiveness of relational thinking more clearly than that of art and literature”[vi]. In this sense, Niemeyer’s biographical profile is known through his personal accounts (mainly, *The Curves of time* and *Quase memórias*), which allows the author, even posthumously, to retain authority over his successful narrative.

Moreover, the study of authors in transit has gained increasing relevance in the academy. Within the scope of reputation, papers such as “Privileged Nomads” by Dick Pels and “Figures of the cosmopolitan: Privileged nationals and national outsiders” by Eleonore Kofman are articles that put travel in the foreground to places of special circulation and contact with central movements[vii]. Literary critic John Rodden made considerations about the importance of long stays in important cultural effervescence sites in an author's biography:

The field of activity and proximity to 'reputation builders' by words and image are crucial. Having access to capitals of literature, film, and television such as New York, Hollywood, London, Paris, and pre-World War I Berlin is especially good.[viii]

Although referring to the First War on Berlin, the critic weaves, in this article, a timeless vision of excellent places of cultivation of reputation from the 19th century. The frugality of Rodden's illustration takes on color when it is borne in mind that Niemeyer, with the exception of London, built in all these cities: in New York, the Pavilion and participation in UN Headquarters (1939 and 1947), near Los Angeles, the Strick Residence (1963), in Paris, the Headquarters of the French Communist Party (1966) and in Berlin (obviously after the Second War) the housing building in the Hansa District (1957).

The ethnologist James Clifford, in the introduction to his book *Routes,* places an interdisciplinary inquiry on the question of the movement of consecrated figures within a culture: "how are complex cultural conjunctures, temporarily and spatially interactive?"[ix] To directly accredit Niemeyer's choice in foreign contracts to his merits as a favorite architect of state commissions in his country of origin is a naive subscription to the architect's constructed narrative about himself. To assume the condition of Niemeyer's total career as '*in transit*' presupposes to put in check his position as a national champion as the cause of his international projection[x].

Before *Brazil Builds* exhibition in 1943, which has guided the international audience around Brazil for decades[xi] , publications interested in international vanguards gave space to Brazilian Architecture through the works of Rino Levi and Marcelo, and Milton Roberto. Back then, modern architects had to fight for space in media with the *Art Deco* highrises and the fascist extravagancies of Piacentini, Rino Levi published in France cinemas their UFA multinational in Sao Paulo and in Italy, the land of their training, exposed residential buildings made in the capital’s Paulista. Marcelo Roberto and his brother had access to the American editorials: they disclosed the headquarters of the Brazilian Press Association and published the Santos Dumont Airport in *Architectural Record*[xii] .

During these early exchanges between the foreign press and Brazilian Modern Architects, Niemeyer’s internationality has bloomed simultaneously to his first individual works. In 1938, the author had the opportunity to go to New York on behalf of the Brazilian Foreign Office to build the country’s pavilion at the World’s Fair (*img. 01)*. There, he established contact with Modern American Architects, especially Wallace Harrison and Paul Wiener[xiii]. When *Brazil Builds was* published in 1943, after the eponymous exhibition at the Museum of Modern Art in New York (MoMA), Niemeyer is represented by national and international commissions: besides Pampulha buildings, the exhibit mentions a house made in Ceará for Herbert Johnson - an illustrious client of Frank Lloyd Wright - and the Brazilian Pavilion, which was highlighted by his countrymen in the catalog.

“There were a number of excellent modern buildings at the Fair, but none was more light-heartedly elegant than the Brazilian Pavilion”[xiv], celebrates Goodwin. No other architect has works outside the country or made for North American clients in the catalog.

The architecture of the Pavilion itself is the result of a partnership between Lucio Costa and Oscar Niemeyer. They had winning entries to the competition held by the Ministry of Foreign Affairs of Brazil. By the initiative of Costa, both architects had teamed up to make a final version of the Pavilion. For today's standards, it would sound like phantasy: time was running short already, and to make a final version synthetizing two projects, the Ministry sent Costa and Niemeyer to New York to conceive the building together, fixing the practical issues in New York[xv] *(Img. 02)*.

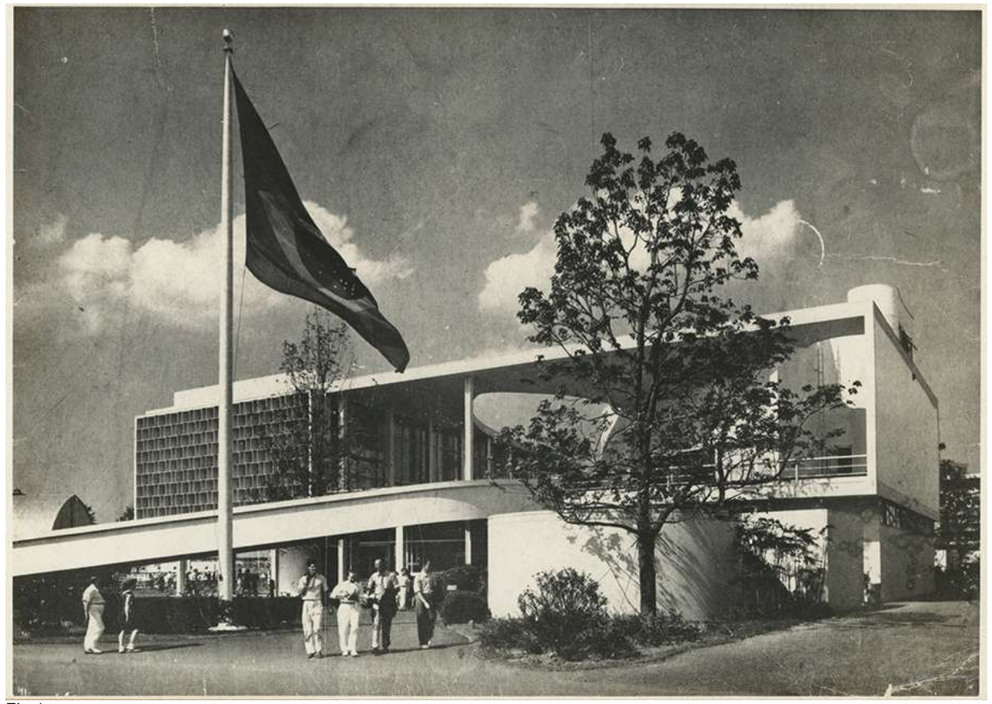


Fig 1.



Fig 2.

Niemeyer spent eight months in the U.S, four of them without the presence of Lucio Costa. He stayed in the country until the beginning of 1939 to supervise the construction of the pavilion, a task that involves more dialogue than producing drawings, as it requires negotiations, practical discussions about money and so on. It is certain that Niemeyer had close contact with the architect who made the interiors of his pavilion - Paul Lester Wiener - in addition to the show's chief architect, Wallace Harrison. These contacts were already signed to make the architect known as they were figures linked to top executives in America like developer John D. Rockefeller Jr.[xvi]. These prominent Americans had bonds with arts institutions, such as the Museum of Modern Art and its Modern Architectural curators, like Goodwin, Hitchcock, Johnson, and the lesser-known Stamo Papadaki. Probably during this stay, Niemeyer was contacted by Herbert Johnson, which would justify the project for his home in Ceará. These are clear signs that it has not been eight months dispatching ascetically from the Brazilian embassy[xvii]: Niemeyer met Americans and participated in many fronts of this world`s fair.

The core of what is widely understood as Modern Architecture in Brazil is deeply connected to Lucio Costa and Oscar Niemeyer, but in 1938 these roles weren't exactly in place yet. Costa was already important for his position as an intellectual. His erudite approach to architecture already granted him a distinction as the mentor of a generation of professionals in Rio de Janeiro mainly due to his fast but shocking tenure as director of the *Escola de Belas Artes*. Niemeyer was a recognized talent among many in the city, with a formative experience side by side with Costa in the project team which designed the *Ministério de Educação e Saúde*. The Pavilion was part of an ongoing effort by some architects to connect the image of Brazil to Modern Architecture. Costa would justify the Pavilion's final design musing that "in an industrial land and culturally developed such as the States it wouldn't be reasonable to think in standing out [the pavilion] through pageantry, monumentality or technique"[xviii].

The sentence implies that Costa and Niemeyer wanted it to stand-out, but not through technique. Lesser than a provocation to what Modern Brazilian architecture could not aim for, it was a call to what it already was. There still wasn't a bulk catalog like *Brazil Builds* to organize the distinctive aspects of Modernity in the country, so it was in the hands of Costa and Niemeyer to design this building as a messenger of Brazilian spatiality, part of the broader action of exhibiting Brazilian features to a foreign audience.

The building has a long curved outdoor ramp that leads to an open balcony and an internal garden with aquatic species on a reflection pool. The site plan shows an even distribution of open and closed spaces, making a wide-open pavilion. The gardens by young Roberto Burle-Marx mentions the imponent nature in Brazil adding to the discourse the message that Modern Architecture in Brazil is

'light-hearted' because it is made in open connection with its vivid natural surroundings. The Fair would be on show from 1939's Fall to 1940's Spring, covering all weathers and would expose the contrast between the Brazilian pavilion and the rest of the other buildings that although modern were enclosed.

These characteristics were remembered and praised through Goodwin's *Brazil Builds.* On creating the notion of a cohesive generation of Brazilian avant-garde, the magazines replicate Alvaro Vital Brazil, Marcelo Roberto, and Oscar Niemeyer's best-known projects relying on their openness, care for a tropical climate, and constant mention of nature in the images. The pavilion is one among many episodes on the book, but MoMA's narrative should correspond to what American viewers could have seen four years before in the Fair. As carefully planned as the cultural bridge between Brazil and U.S. was being made, the aspects that made the pavilion *stand-out* in New York World's Fair should be what would make the whole of Modern Architecture in Brazil from the rest of the world[xix].

Brazil builds is part of an effort made by the Americans to show how Modern Architecture had an approach to industrially produced architecture that would not stand against cultures and climate conditions. Brazilian Modern Architecture as shown by MoMA as part of a project for Modern Architecture itself. Niemeyer, for one, was just part of Brazilian Modern Architecture.

During the 1940s, however, some works which involved Niemeyer would reach new meaning inside American circles. In 1944, in Paul Zucker's proceedings of the event *New Architecture and City Planning*, Sigfried Giedion publishes a conference on "The search for a new monumentality". Giedion wants to bring together Modern Architecture and monuments for democracy. Often relegated by the *Avant-Garde*, monumentality was brought back as a question for, according to the historian, "Every period has the impulse to create symbols in the form of monuments."

Giedion shows an image of the *Ministério da Educação e Saúde* without mentioning it in the text, suggesting mysteriously that the building made by Lucio Costa's modern joint venture could be a model for the future of international monumentality.

In the same direction, MoMA's curator Elizabeth Mock stated in the exhibition *Built in the U.S.A.* that "The democracy needs monuments. There must be occasional buildings which raise the every-day casualness of living to a higher and more ceremonial plane." Mock uses some American works but mixed among the images there appears the Brazilian Pavilion with its curvy ramp.

American intellectuals were interested in works of Brazilian Modern Architecture that had a public representative task as possible prototypes for the exultation of democracy. If those buildings were made during Vargas' dictatorship is irrelevant. The fact is that they could be considered Democratically monumental, as a shift on the *lighthearted* opinions of Goodwin's *Brazil Builds*. This sensible operation would qualify Niemeyer and Costa in a different rank as foreign professionals: not as official architects – which they weren't – but as architects that had a more political discourse and portfolio on the future of International Modern Architecture.

In the meantime, Niemeyer did his homework. As the association with openly democrat politician Juscelino Kubitschek gained endurance, Niemeyer's hegemony begins to take shape. The Church of São Francisco de Assis, unfinished at the time of the 1943 exhibition, is the first modern Brazilian work that is simultaneously published in several international magazines: in the American *Architect's Journal* and *Progressive Architecture*, in the French *Architecture d 'Aujourd'hui* and in the Italian *Stile*.

The success and recognition abroad were constantly used as a tool to overcome unpleasant attacks made on his work. The very church of Pampulha itself was not a sacrament in the 1940s due to polemics in the scope of the clergy. Brazilian Historical Heritage Preservation Institute (IPHAN) took matters to itself preventively listing and fundraising the restoration of the then-abandoned building in a process that would be extended all the way to 1959. In the justifications, the international recognition the temple achieved was the core argument:

... Considering the unanimous praise aroused by this work in the centers of greatest artistic and cultural responsibility throughout the world, particularly in Europe and the United States.[xx]

The pendulum movement of reputational construction is revealed from its recognition abroad, which is a model for understanding the architect's career. The church gave Niemeyer momentum to be selected to join the team of notable Modern Architects led by Harrison (who headed the works of the 1939 Fair), Given the presence of so many other names already published abroad as prominent Brazilians, this highlight by Niemeyer can only be understood through three reasons:

1. He was the face of 'Modern Brazilian Architecture' with the special distinction of being associated with democratic monuments discussion from the end of the War.
2. He had a good prior relationship with Wallace Harrison and his entourage mainly due to the 1939 World's Fair in New York.
3. The widespread reach of the Church of Pampulha's project had the mark of continuity of his role as an architect whose raw talent stood out.

Its relationship with Le Corbusier was still rather circumstantial to suggest his commitment with the appointment of Niemeyer. However, some testimonials say Le Corbusier and Niemeyer immediately met right after the Brazilian's arrival at the workshop. There starts the well-known process in which

both architects start supporting each other, then finally making different proposals that stood out from the rest of the architects leading to some rivalry and, finally, developing together a definitive proposal for the building.

The whole process served Niemeyer's career very well. Regardless of the final version was altered by the final Board of Architecture, the Brazilian architect had an international work of an international organization with an architecture that was celebrated although it did not have the distinctive traces of Brazilian Architecture. 2332's version, the Corbusier-Niemeyer proposal, wasn't really an ambassador of open architecture and its democratic appeal was in the institution itself rather than in the squares it intended to create.

In no way this has discredited his talents, rather serving to keep the always ambiguous position of Oscar Niemeyer as an autonomous figure in the architectural context of Contemporary Architecture: Simultaneously Brazilian and International (although never regionalist), Monumental and Democratic, Iconoclast and Official Architect. In order to be this persona, he could never be in one place: he should always be *in transit*.

This was particularly convenient in a historical moment filled with ambiguous places with ambiguous policies such as the Twentieth century. After the 1940s and the United States, the intense 1950s came, when he built substantially in São Paulo and Minas Gerais and led the Architecture and Urban Design Department of *Companhia Urbanizadora da Nova Capital* (NOVACAP), but he also worked in Latin America, in its proposal for the Museum of Caracas and in Europe, with the participation in the Hansa Neighborhood, in a Berlin divided between two Germans. After completing his work at Novacap, delivering Brasilia in 1960, he soon traveled to Africa, Asia, and Europe, formalizing a traveling office that participated in initiatives in Tripoli in Pan-Arabist Lebanon, Haifa in the recently founded Israel, the Headquarters for a split French Communist Party in Paris, the educational buildings in newly independent Algiers and many other places through mainly public (but also private) commissions. From the 1970s onwards, in a globalized global situation, the internationality of his work becomes trivial in a dynamic that accompanies him until his death in 2012. The projects for Le Havre, in France, in 1972 and for Fata Engineering in Italy, in 1974. Even during the 1980s and 1990s, with few commissions built abroad, Niemeyer had contracts and drawings on different parts of the globe. When he died, he had commissions in progress in Argentina and Algeria and left works built on four of the six continents.

It is a career that could not be made away form a condition of constant movement. It has supported the overall historiographical ideology that Oscar Niemeyer's work belonged as part of Brazilian and International Architecture. However, it also belonged to something else: to the dubious decades when his career started, from the 1930s to 1960s, when the cities and countries were still being reshaped into global economic movements that would finally suppress international into global and transit into transitory.

Conclusions

Oscar Niemeyer was a Brazilian Architect. His works are often taken as excellent testimonials of Modern Architecture trends in the tropics to such degree that one can be taken as another. No historiographical approach has assertively scrutinized the balance between national and international reputation, which leads to blind spots on academic studies of Niemeyer. It is clear that New York's World Fair made Niemeyer an early bird, providing him priviledged contacts and opportunities that helped his ingenious ideas on Modern Architecture to be widespread and, most importantly, to always be positioned side by side with international works. The *modus* he found in such episode was replicated all through the XXth century, which claims for some revisionism on his image. Mainly, it is necessary to acknowledge the autonomy of Niemeyer's work from his country of origin, recognizing the complexity of the architect's journey. The understanding of Niemeyer's carrer urges new methodological strategies that may help to capture the constellation of realities, political struggles and new transformations of a specific task for some architects during Post-War era worldwide, as wanderers creators of ideologies of national affirmation mediated by global issues.

Notes

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Image Captions
Fig 1. Brazilian Pavilion in New York's World Fair, 1939. In. Casa de Lucio Costa: *http://www.jobim.org/lucio/bitstream/handle/2010.3/4526/III_A_46-03780_L.pdf?sequence=2*
Fig 2. Oscar Niemeyer, Lucio Costa and his family in New York to design the Brazilian pavilion in 1938. In. Casa de Lucio Costa: *: http://www.jobim.org/lucio/bitstream/handle/2010.3/4526/III_A_46-03780_L.pdf?sequence=2*

Necessary Acknowledgements
The enduring pandemics and the overall unavailability of archives and physical libraries has seriously undermined many of the verification necessary to accurately write this paper. I've relied on existing bibliography available online and assumed a rather essayistic approach uncommon to my usual methodology. In order to accept such approach, I relied on Adorno's notes on the Essay, in which he states: "The essay has to do with that which is blind in its objects". This paper, for itself, has its dose of blindess, assuming eminently blind all historians of architecture without proper access to libraries or archives.

Edge–to-Edge Art:
from the dialectic of aesthetics to the dialectic of existential possibilities listed by Miwon Kwon and Jean Réné's praxis

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Abstract

This study aims to analyze public art through the perspective of the art curator Miwon Kwon, to ponder upon contemporary street art by the artistic actions of Jean René (JR), a French photographer and graffiti artist. Kwon's work will be used as a guide to comprehend this new form of art, which proposes an approach to urban life's current process. This work also intends to verify how critics receive and evaluate JR's art, its relation with the chosen city spaces to intervene in, as well as to reflect upon human relations, sociability, and behavior triggered by these practices. Kwon's explanations aid the creation of a repertoire that enables interpretations about public art along with the social aspects involved in an artistic installation, instead of the specificity of physical space. Therefore, it has been used one of the three specific paradigms from the site listed by Kwon, "Art in the public interest", as well as reveal the four Kwon's categories in the public art area, differentiating community's concepts: Community of Mythic Unity, "Sited" Communities, Invented Communities (Temporary) and Invented Communities (Ongoing), to dialog with JR's public urban art. The outcome of this study was the possibility to realize the breadth of art, the achievements conquered by the artist, the necessity of active social engagement to define a target audience, the dialogue with urban areas, and also the possibility to empower specific groups, often a marginalized sector of society, and give them the voice they need.

Keywords: Public Art, Art for the Community, Contemporary Community Art, Miwon Kwon, Jean Réné (JR).

1. Introduction

This work introduces some of Miwon Kwon's[1] (2004) concepts of art in the public interest and art for the community toward the engagement of specific community residents through artistic creations. It is also intended to compare Kwon's ideas with the contemporary activities of the French artist Jean Réné[2], also known as JR, who implements artistic actions in marginalized urban communities, engendering empowerment and an identity policy.

Site Specific is comprehended as an institutional criticism and a more popular perspective, that initially was illegal. It was formed by a minority group, marginalized both politically and culturally, which came out of the Site Specific Institutional, denominated "White Cube" by O'Doherty (2002). This author defines the "White Cube" as a system, that can be represented as a museum/gallery or a neutral space in which there is no interference, in a way that art productions concentrate within this area.

The "White Cube" is an architectonical device used to promote simultaneous discussions, as a place that conditions people to a certain behavior that follows the normative conventions between an observer and a work of art.

Regarding the "White Cube" standardization process, the modern movement begins to enquire about this kind of arrangement and practice, as well as manifesting its craving for extension of the art field. The modern movement proposes a rupture in this established structure, in other words, it urges "to leave[3]" the "White Cube" of Site Specific Institutional.

In such cases, artists initiate a mission to expansively engage the population of urban spaces, and by doing so, they start to drift away from the dialectic of aesthetics. Furthermore, artists approach themselves to the dialectic of existential possibilities, craving for reaching a specific audience directly and unexpectedly, longing to establish a relationship with local communities.

Kate Ericson and Mel Ziegler stated that art is a valuable social tool. Moreover, art had its function altered gradually, ranging from a frivolous function of aesthetics to a design function, involving a social function as well. "[…] function over contemplation, and open-endedness over aesthetic resolution [...]" as affirmed by Bishop. (BISHOP 2006, 111)

This new kind of behavior differs from the one in the "White Cube". When the artist couple formed by Christo and Jeanne-Claude wrapped the device, which can also be named museum/gallery, the architectonic building became an artwork. This sort of manifestation brings art outdoors, and consequently alter the pattern of thinking about art.

The space of art begins to diverge from its literal space, along with the withdrawal of a primary necessity to have a specific location. This was claimed by Smithson as a "non-site". Additionally, to expose a work of art in a museum/gallery, there is a subordination to the chosen institutional space. A critique of the cultural confinement and space-oriented practices is initiated, along with an unceasing pursuit of intense engagement with the exterior environment to expand social relations.

2. Theoretical Foundations

Miwon Kwon (2004) uses the expression "public art" considering its representativeness in Culture in Action event, defined by a series of interactive and ephemeral activities between the participants of the community and the artists. Engagingly, there are interactions with the social aspects of the routine of a specific audience that is relevant for them.

Suzanne Lacy stated that public art is a new category and style of art, also emphasizes the urban facets. Moreover, public art can be considered an innovation of aesthetics, as well as political activism and a new strategy of urban regeneration.

Therefore, the artist starts to experience a considerably amplified cultural acceptance, with a larger range of places to work in. Negative critiques, however, tend to analyze it as an unavailing way to explore a community and/or social development, whereas positive ones perceive Culture in Action as one of the most formidable events.

In Culture in Action event, one of the main objectives claimed by the art curator Mary Jane Jacob is a modification of the spectator role to an active artist role, as interpreted by Kwon (2004, p. 107) "In doing so, they seek to empower the audience by directly involving them in the making of the artwork, either as subjects or, better, as producers themselves".

Nevertheless, the artist begins to act as a social agent to aid the underprivileged through humanitarian values, to incorporate art into everyday life aspects. It is believed that such an action has significance in the democratization of art, for the reason that it celebrates ordinary people's realities. "The aura of works of art shifted to its audience", as claimed by Bourriaud (2009, 82).

Public art has three considerable paradigms of evolving stages of art in public spaces, as alleged by Kwon (2004). Firstly, in "Art in public spaces", the abstract works of art in public spaces relate to the local context, despite not being related to the audience. Additionally, paradoxical situations arise from some nuances of the modern movement, involving popular topics.

Kwon (2004) affirms that public art is designated for a universal audience. However, it is questionable if the term "universal" also comprises people with no artistic repertoire, therefore, there is an inconsistency in the affirmation that public art is for everyone. For instance, sculptures in an "empty" public square next to institutional buildings, despite its function to embellish public spaces, raised some questions about those who chose such places and objects and whether they were somehow authoritatively selected, in disagreement with the values of a period.

According to "Art as public spaces", artists collaborate with other professionals, in a new and revolutionary modern manner to think about spaces. Nonetheless, this may be a challenge to architects, who are used to reflect upon spaces and their functionality, considering the specificity needed to turn works of architecture into art. This alliance with other professionals aims at urban integration and an expansion of the dialogue between art and its audience, in urban spaces, to reach a useful kind of art.

The third topic is "Art in the public interest", and it's a priority in this study. In this paradigm, artists bring the aspects of a community to the art field, creating a social and urban connection with the chosen location. The author develops a critique of the art community, based on the existent connections between Artist and Community & Community and Artist. The community itself experiences the work of art and determines its significance.

Thus, the community would be associated with the economically, politically, and culturally marginalized groups of the city, and this could be the new communitarian and creative activism. According to Florian (2014, 6) "Self-Empowering" of an individual or a group is at the core of what drives the protagonists of this handbook: it is the basis of any form of activism.".

In theory, there is an integration with specific groups of a community, however, in the majority of cases, this doesn't occur due to the specificity of the audience. Therefore, this causes an antithesis. The thought is opposite to the definition of community, which means a shared sense of common identity, based on humanitarianism.

It is questioned to what extent it is possible to broadly empower specific groups based on common conditions and how the word community is being used terminologically. Kwon (2004) develops four categories in the public art field to distinct concepts of community.

First, in "Community of Mythic Unity", the author quotes Suzanne Lacy's project Full Circle, presented in figure 1, which presents a community established by the social category of women. This group, however, distinguishes itself from the larger social group that forms a coherent community, since there are intrinsic differences that are overcome by a common outlook. These women dwellings are located in Chicago city, which is an aspect shared with the group as a whole.



Fig. 1

Second, in "Sited Communities", artists work in organizations with a defined audience, identity, and place. This community interaction establishes collaborative partners, in such a way that specific projects are attended beforehand. The Culture in Action project involved several urban agents, artists, political entities, communities, and its inhabitants. Some critics, nevertheless, called into question the treatment of specific communities.

Third, in "Invented Communities (Temporary)", the work of art determines the community based on collective activities as well as the work itself coordinates the group actions. Exemplified through Mark Dion and Daniel J. Martinez's representations, in one of Martinez projects the community inhabitants showed considerable willingness to cooperate with the artist, with great involvement, thus ensuring its success.

The fourth category, called "Invented Communities (Ongoing)" is an unfoldment of "Invented Communities (Temporary)", that focus on community sustainability over and above all the work and its support. This can be exemplified by the construction and maintenance project of a hydroponic garden, conducted by the continuous effort of the group of volunteer artists formed by Richard House, Wendy Jacobs, Laurie Palmer, and John Ploof.

> One of the key reasons for their sustainability was the artists' intimate and direct knowledge of their respective neighborhoods and those living in them. As long-time residents of Chicago and as members of local community groups themselves, Haha and Manglano-Ovalle approached their projects with a realistic (rather than a hypothetical) sense of possibilities. (KWON 2004, 132)

A "community" is defined by Culture in Action event as an authority that favors collaborative artistic partnerships. Therefore, artists often let go of their originality to create an identity that empowers specific community groups, targeted by social deprivation.

Next, through the explanation of Kwon's (2004) ideas of public art, the projects of the contemporary artist JR were chosen as a study subject of this work. This artist has already spread his art over Parisian outskirts, as well as on some ruined houses in Shanghai, Istanbul, Liberia, Kenya, Somalia, Jerusalem, and on the border between Mexico and the United States of America, as it can be seen in figure 2.



Fig. 2

In this illegal installation, the artist worked with a 20 meters black and white photography of an infant. According to El País Newspaper (2017), the artist wasn't recognized when he went through customs, and upon being asked the purpose of his trip, he affirmed he traveled to visit the photography exposition, the immigration officer just answered "I haven't seen it because I didn't have enough time, but many people here went to see it[4]"6.

His works are very successful and worldwide renowned, according to El País Newspaper (2017):

> [...] A single picture done by him, in aluminum, has been sold for 25.000 dollars, according to Sotheby's auctions house, and his projects' lithographies cost at least 800 euros. The fee charged by a commissioned production, such as the gigantic pictures of athletes that were installed in Rio during the Olympic Games is unrevealed[5].

One of JR's community works, large black and white panels, have been chosen to be further analyzed in this study. Located in the first "favela[6]" of Rio de Janeiro city, known as "Morro da Providência". Rio de Janeiro's slums undergone a political identity process, as it can be seen through the use of the term "favela" to call "Morro da Providência" and other slums. Nevertheless, this word has a pejorative connotation, and inhabitants may prefer to use the term "community" to name their neighborhood.

In the "Morro da Providência" community, JR illustrated 40 façades in 2008 according to the G1 Rio news agency (2016), in a composition of extensive images from the faces of the community residents depicted on the slums' walls. These community inhabitants were selected by the artist to represent a specific group formed by women, mothers, grandmothers, sisters, and friends, that are coping with grief and loss, as represented in the mosaic of faces on Image 03.



Fig. 3

At the beginning of the project, JR faced some difficulty to access the target group, the "community" and its specific community formed by anonymous women, due to their lack of interest to have their pictures taken and to participate in the art installation. Nonetheless, the continuous and consistent contact was fundamental for the artist to achieve a level of trust with these women, to create a relationship between the artist and the community, through interaction and time. This is a characteristic of the "Art in the public interest" written by Kwon about the relationships between Artist and Community & Community and Artist.

3. Literature Review

It depends on the artist's status, whether it is successful or not, to critically debate the result of an art installation, or a public art project.

> But the process is far more complex than can be accounted for by such a formulaic reduction. To be sure, the artist's relationship to a group of people, a particular neighborhood, or a city plays a crucial role in the type of collaborations that are logistically and creatively possible. But in each case, the particularity of this relationship—of the artist's connection to the area and its people through geographical ties or past personal experiences—strikes a different balance in the triangulation (of power) between the artist, the sponsoring institution, and the chosen community group. (KWON 2004, 135-136)

As reported by El País Newspaper (2017), JR's installation created a large panel of mosaics with expressive looks, and it had massive media attention due to its insertion in Rio de Janeiro city's social landscape, as it is possible to be seen even from rich neighborhoods. When journalists wanted to discover what was going on, JR was already far away from Rio de Janeiro city.

According to the artist, not being present in the city was the best way to give visibility to this specific community group, to give the protagonist role to these unnoticed women, that coped with the pain of loss without ever being heard. The artist affirms to El País Newspaper (2017): "Their narrative is much more interesting than my one", he said. "The city identified this place as a violent area and perceived its inhabitants as monsters. My art's power is to change the perception of things. Not to give answers, but rather to create many questions[7]".

By comparison with Kwon's (2004) ideas, it is possible to recognize layers of comprehension of public art through JR's work. This type of art arouses debates, a feeling of estrangement, and a sensation of disturbance caused by the presence of art in the space of a specific group.

Kwon's (2004) art in the public interest comprises JR's project, due to the elicitation of a specific aspect of a group in a community, in an excluded space of the city, with marginalized people. By using art to educe social interactions, it was possible to involve social aspects and existential possibilities.

JR's public art creates a connection with its place, as in "Morro da Providência"-RJ, that simultaneously brings out the discussion of the human relationships existent within his project ("Women are Heroes") and the community. It connects the community with the artist, based on the communal social and urban aspects and the eagerness to empower women and their pain.

Giving voice to someone also means giving representation, negotiating social and political interests, as well as ensuring democratic moments even though the system is not democratic. Art can expose

sensibility through reality chaos. This allows women to have representability spaces despite their social situation.

Contemporary street art and the persistence of the feeling of estrangement aroused by it represent artistic activities in the face of human installations, employing a specific community in an urban and socio-political context. These conditions are inserted in the dialog of similarity with Kwon's ideas and the inherent relationship with a specific community.

According to Foster, in Kwon's (2004) text, these actions can be considered benevolent, well-intentioned, a way of democratization, and also a manner to make the audience the producer of their history, in a self-affirmation method.

JR's installation in "Morro da Providência" community enters the global art circuit with a series of practices and methods, that aim to modify people's estrangement feeling towards each other through art. This art theme provoked some inquiries, done by Kwon (2004), about how these artistic actions should not be considered political expressions, but perhaps could be called political art. However, JR's message through art tends to be considered easy and precise to all. His art deals with social problems by empowering a specific social community, in a sort of social engineering that aims to disarm people instead of solving the community's tensions.

Moreover, the other issue to be considered is the diversity of segments in a community. Despite the enforcement of the identity of a determined portion of the group, this policy of identification doesn't represent everyone who lives at that place. Working with a community and a policy of identification, involving minority-groups, implies more than arouse specific social claims. It involves starting a political game. Social changes arrive by the formation of specific groups that have political participation, that fight for urban rights, associated with the country's political and economic system.

JR's artistic installations in Rio de Janeiro provoked a dialogue with the Summer Olympic Games of 2016. Thus, the artist wondered who would be beneficiated from a large amount of capital invested in this kind of event in the city. Even though marginalized communities might profit from it, it is questionable what part of this value would be directed to investments to this specific group.

The faces looking directly at the rich neighborhoods of the city are the same ones that only saw the big Olympic event from the distant community, in addition to other social, political, and economic aspects involved in the new layout of the city. An artist who is inclined to work with public art can achieve good results, providing contradictions, dialog practices, and infiltrating into several activities.

The artist's previous function of producing objects is now extended to a broader role, which includes not only being a curator, administrator but also being the developer of actions in social and political work. By leaving the "White Cube", of the "Site Specific Institutional" and leaning directly towards "Site Specific", in urban spaces, the artist experiences these mentioned consequences. Kwon (2014) affirms in her text that, according to Heartney, when the artists leave to the open spaces of the cities, they become a supply of commerce workers, critics, and art administrators and/or curators, as a result modifying artist's functions.

These considerations enable dialogs of art in a space of ideological product in urban spaces, meaning a radical turnaround in local specificity, comprising a new economy of the rendering of services, that changes artistic production to a kind of barter in city's relations.

4. Final Considerations

JR promotes a social interstice through public art in "Morro da Providência"-RJ, ensuring a new possibility of work in a broad urban space. The new art forms presented in his project "Women are Heroes" assured him a successful artist status, strengthened by the Technology, Entertainment, Design (TED) foundation award, that legitimized his installation. As the artist became increasingly renowned, institutionalized art critics started to examine his works. Therefore, JR's works entered the global art circuit, leaving behind the background of illegal actions in marginalized communities.

Kwon's ideas conform to these works, due to its approach to this new space, this new style of public art, as well as the stimulation of discussions along with social and urban aspects through the work of art in a specific community. These works are also done insofar as the representative democracy of the political and economic system has been discredited.

JR's presence in "Morro da Providência" community valued its space and his installation is conformed to "Invented Communities (Temporary)", due to his art project being packed with meanings, employing collective activities. His installation can also be considered in the category "Invented Communities (Ongoing)", since his work has a catalyzer role, and it remains active through the faces looking toward the rich neighborhoods, in the urban space.

The artist's communication methods are unique, practicing art with an aesthetic sensibility, on debates of the specific community's existence, approaching urban life ongoing process, and simultaneously coexist with the manipulation of the population.

JR's praxis and Kwon's ideas merge in the common preset aspect of the community in favor of practical public art, in which the community forms itself in the developed project and the specific group is defined by the work itself, in an identity policy of a defined subject.

Notes

1 Miwon Kwon was born in 1961 in South Korea. She is an art history professor at the University of California as well as a renowned art critic. Her studies are used as an important reference in contemporary art.

2 Jean Réné was born in 1983 in France. In 2011, he was the winner of the Technology, Entertainment, and Design (TED) foundation award, receiving US$100 thousand, used in the project Inside Out.

3 The word *"leave"* is being used in a figurative sense from this criticism, and it doesn't mean surpassing works of art, as they can coexist.

4 *"Eu não vi porque não tive tempo, mas muita gente aqui já foi ver."*

5 [...] uma única foto dele, montada em alumínio, foi vendida por 25.000 dólares (cerca de 80.000 reais), segundo a casa de leilões de arte Sotheby's, e as litografias de seus projetos não são avaliadas em menos de 800 euros. O cachê que cobra pelos trabalhos sob encomenda, como as fotos gigantes de atletas que instalou no Rio durante os Jogos Olímpicos, é um mistério talvez milionário.

6 According to the Brazilian Institute of Geography and Statistics (IBGE), a favela is defined as an irregular urban agglomeration that occupies private or public lands that belong to others, to build dwellings. It's characterized in general by an irregular infrastructure, lack of basic services such as clean drinking water, electricity, and so on. IBGE uses the English term *"slum"* to translate favela. In Brazil, however, these irregular settlements can be called by a wide range of names, such as *"favelas", "grotas", "baixadas", "mocambos",* and so forth.

7 *"A narrativa delas é muito mais interessante que a minha". "A cidade via este lugar como um local violento, viam seus moradores como monstros. O poder da arte é mudar a percepção das coisas. Não dar respostas, mas gerar muitas perguntas".*

Image Captions

Fig. 1. Full Circle (1992-1993), by Suzanne Lacy.
Fig. 2. Illegal installation on the border between Mexico and the United States of America.
Fig. 3. Installation in Morro da Providência-RJ.

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The *architectural incident*.
A regard to performativity as a design strategy in Lina Bo Bardi's MASP and SESC Pompeia

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Abstract

Lina Bo Bardi, beyond her career as an architect, was a multidisciplinary artist strongly connected to theatre. This condition led her to a complex regard to space and human behaviour. But how did she integrate the apparent polarities between the two disciplines when it came to the practice of architecture? The ephemeral in opposition to the permanent, the actor/spectator against the user, or the ritual confronted to the habit. As Walter Benjamin said: "The dialectical consideration of this question (…) can never lead anywhere by starting with isolated and lifeless objects". In this dynamics, Bo Bardi expands her concept of architecture further from form and function towards social and political dimensions. And this "architectural incident", as quoted by her, is where architecture can meet performativity, where the prejudiced opposition becomes the germ of enrichment.
Exploring her writings about the concept of architecture, continuous references to theatre revolutionary figures as Adolphe Appia, Bertolt Brecht or Antonin Artaud become part of her reflections. Tracing the design strategies that come from this hybrid experience leads to a performative design regard. We navigate through the internal dialogue between both disciplines in three (not enclosed but permeable) blocks: active experience, co-build storytelling and disrupted habit. Here, two case studies, The Museu de Arte de São Paulo and the Sesc Pompéia analysed.
The expanded architecture as a living mediator between space, body and collective identity – that Bo Bardi practices in Brazil in the second half of the twentieth century – becomes now as contemporaneous as ever when architecture seems to overcome objecthood worship of buildings and tries to establish a new discourse by democratizing it. In the midst of that crisis, it might make sense to explore among new approaches. Perhaps we can find some answers in the betwixt and between spaces through some of Lina Bo Bardi's strategies.

Key words: Lina Bo Bardi, performativity, culture, theatre, architecture, design strategy

1. An 'annoying' situation

"As regards to the little seat, all in wood and without any cushion, is to observe that the 'autos' of the Middle Ages were shown at plazas, with the public standing or even circulating.
The Greco-Roman theatres had no cushions: they were made of stone, outdoors, and the spectators got wet under the rain as they do now at the bench of the football stadiums, which have no cushion either. The upholstery appeared in court theatres in the 18th century and they still exist nowadays at the comfort of the Consumer Society.
The little wood seat of the Pompeia Theatre is just an attempt to give back theatre its attribute to 'distance and involve'; not just seating".[1]

This is the response Lina Bo Bardi stated against the critics received about the discomfort of the theatre seats designed by her for the Sesc Pompeia. This anecdote makes a strong position about what she believed architecture had to be. That sensation of a somehow annoying seat that does not let you stay still. You continuously need to be rearranging your place, your position and your regard. And that movement makes a slight noise that does not let you go unnoticed for the rest of the audience. You are pushed to take part, to perform in the space given. This is what she calls the "architectural incident"[2] as a production space, a dialogue between the place and the users that become *actors*, with their own agency and are able to be transformed and to transform at the same time the unstable limits of the architectural spatiality.

2. Performativity as a strategy beyond theatre

The above-mentioned parameters of dialogue and transformation connect directly with the definition of performative/performativity considered here. As Erika Fischer-Lichte states in her writing "The transformative power of performance: A new aesthetics" the concept itself takes its origins from the language philosophy discovery by John L. Austin who refers to the notion of speak-formulate. Inferring "performatives as speech acts that are self-referential and constitute reality". From this basis, the concept of *performative* has expanded to arts and culture itself. In the 1990's decade, the consideration of culture as performance seemed to overcome culture as text. This expanded concept of *performativity* linked with culture was introduced by Judith Butler in 1988 referring to identity and gender, transferring it from speech to physical acts. Since then, different applications of the term have spread over and the term of *performance* has been frequently used as an *umbrella term*. Here we will assume as reference both the theoretical notions of performativity developed by Austin and Butler and the one of Fischer-Lichte that relates them to the definition of the term *performance* from the field of theatre: "the shift from theatre as a work of art to theatre as an event"[3]. Considering the performative event as self-referential, breaking from intertextuality; collapsing dichotomies in an unstable state which generates unpredictable actions and disrupting the ordinary world making it impossible to stay passive.
The interest still alive around her theatre architecture, as Teatro Oficina or the one at SESC Pompeia, studied from both theatre and architecture, reflects the importance of Bo Bardi's contribution to performance spaces. Nevertheless, the aim of this article is to search for the traces of performativity in her design strategies beyond the theatrical environment.

Lina Bo Bardi's last and remarkable collaboration with *scenic architecture* was in 1985, when the Brazilian dictatorship was over and she was working with the group Ornitorrinco, directed by Cacá Rosset, on the adaptation of the writings of "King Ubu" by Alfred Jarry in the play "Physical and Pataphysical Follies". It became a great success and made her win the prize for "best set design": In private he told her assistants: "Set design? I am not a set designer. I've got rid of set design." Later, she prepared a formal acceptance note thanking the jury and writing solemnly, "Theatre is life", and adding, "In a certain sense, traditional set design is the opposite of architecture, and the absence of a stage set is, as Walter Gropius said, pure architecture".[4] Besides her remarks, it comes clear that Lina Bo Bardi considered architecture her way to approach design, even if it was in theatre. She did not like to call it "set design" but "scenic architecture". She did not design from two disciplines but from an entwine and open one, her own approach to architecture.

3. Theatre and culture as a lab for performing space

For centuries theatre had been *boxed* and had restrained *its* "capacity of self-representation and self-reflection of society"[5]. But the 20th century theatre breaks with the traditional staging and recovers its original spirit of forum and mirror of society. This breaking reached a high point during the mid-century, placing theatre at the middle of the artistic debate. The renewed theatre that Lina Bo Bardi experimented and read of, first in Europe then in Brazil, exposed theatre as a ritual collective space where the spectator is provoked, so he cannot stay passive. The *performative turn* means that "the limits between reality and fiction are mobile and depend on permanent agreements and on the transformations that a situation experiences"[6].

Theatre staging as performance can take advantage of its potential abstraction, due to the agreed convention with the audience which transforms it in an active presence. This is the source of a

freedom to explore and experiment that architecture can rarely provide, due to its tectonic and functional condition. Indeed, the ephemeral character of the theatrical event and its low cost provides another significant benefit: a synchronic interpretation of conflict, from its perception to the construction of a discourse, and its display to the audience through the *mise-en-scene*.

Bo Bardi's commitment with Brazilian identity, in profound contact with popular regard but looking to the future, connects with the Tropicalism art activism that rebels against the military regime of that time. An art and cultural movement that arises in the 1960's in Bahia, precisely where she is at that time. Tropicalism provides a great effort to create cultural identity, just in the sense Butler positioned performativity.

Lina's involvement with theatre and culture allowed her to experiment with radical statements on performing space and expanded her own concept of architecture. Along with her other multifaceted interests as furniture design, fashion or museography, they were all faces of a unique conception. As Walter Benjamin said: "The dialectical approach of this question (…) can never lead anywhere by starting with isolated and lifeless objects. It has to insert them into the living social contexts."[7]

4.**Tracing performativity as a design strategy through the compared case studies**
Considering two of her paradigmatic buildings that were conceived in different periods of the architect's life brings a dialogue between their common design strategies. The Museu de Arte de Sâo Paulo (MASP) inaugurated in 1968 and the SESC Pompeia Leisure Centre, fully inaugurated in 1986. The second one might be a more mature work, unifying her previous experiences and fully immersed into the Brazilian art and culture. The MASP has potentially those characteristics but in a more restrained way.

4.1. The active experience



Fig.1

The active experience is a double tension between the ideal place projected by the body from knowledge and representation; and the reality of inhabiting that place in which the body accommodates through its behaviour and actions. The participation of the spectator as an active agent in performance transforms the relationship between space and actors. Co-presence is a singularity of performativity that enables the self-referenced loop in a system of continuous exchanges.

Now it is not just the self-conscience, but the conscience of the others which transforms space identity: the *collective illusion*. "This strategy is captured into Lina's design: For Lina, there is a transference between the observed and the observer, between the fact of observing and the feeling that one's being observed"[8], as quoted by Mara Sánchez Llorens.

_At the main exhibition space on top of the MASP, Lina designed a transparent easel where the paintings were placed. Those easels were disposed along the whole space, and fulfilled all of it, just leaving the necessary space to walk through them and stop for contemplation. Two large glass walls blurred the limits of the exhibition itself. With this spatial disposition what it is exposed is not only the paintings but the visitor too. The observer becomes observed, he cannot be unnoticed. She destroys the traditional illusion at the museum where you can isolate yourself in an individual contemplation confronted with the wall and with enough lateral space to be left 'alone'. Thus, Lina's proposal does not allow you to do that. The glance towards the piece of art always implies the view of other easels and thus the Other. Architecture displays the conscience of a collective experience and transforms the visitor into an actor or performer of space.

_At the Sesc Pompeia, this vision about the presence of the other becomes something integrating. The collective actions transform the space itself; it generates its function. When Lina Bo arrived at Sesc Pompeia in the first place it was already working as a leisure centre where the users participated in its development. The aim of Lina's intervention was to dignify this but keeping its previous spirit.

Everyone could be the 'artist' of the space given. The motto of her exhibition "Bahia no Ibirapuera" of 1959 was "Soyons artistes! Nous le pouvons" ("Let us be artists! We can do it")[9]. This quote came from Appia's writings that concluded the following sentence: "Let's learn to live art in common; let's learn to hold in common the deep emotions that bond us and compromise for our liberation". This makes sense on Lina's standards and engages with collective strategy making visible and performing with the other.

This strategy can also be traced to the disposition of the 'plateas' inside de SESC Theatre. The two of them confronted; half of the audience can observe the other half. Again, observers become observed, and this becomes more complex as the performers go through a similar process. The dichotomy of subject/object is subverted.

4.2. Co-built storytelling

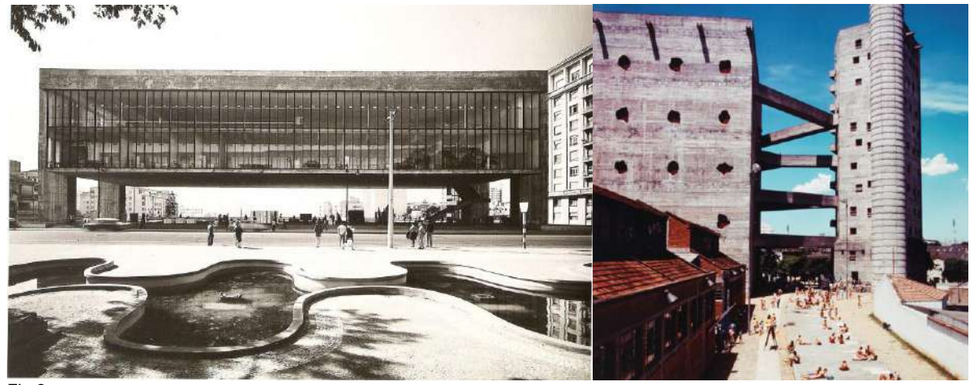


Fig.2

Theatre cannot be separated from stories; storytelling grows from the own origins of theatre. But on performance it had to be an open story, unstable, non finished, as a resistance to imposed myths. This has a remarkable importance in Brazil, imported stories from foreign cultures were prioritized in the beginning of modernity. Although it was in the mid-century with the so called Tropicalism of Teatro Oficina or the Arena, that these stories merged and opened towards a distinctive identity.
"It's a question of continuing to tell stories: it's a question of preventing stories that have been told from being presented as terminal forms. It's a question of composing webs of stories that nevertheless are presented as «lines» or «traces» (Bruce Chatwin's expression). It's a question of telling stories that can maintain a community in movement and that cannot be let go of."[10]

Lina's performative design strategies continued the Tropicalist discourse as an open dialogue between the technique, the modernity and the art crafts work; reflecting through her forms a plural identity which she found on her early days on Brazil.
The liminal condition that interrupts the ordinary world of the user suspends the indifference to environment. The result from the open 'stories' would affect the traditional limits of architecture space for Lina Bo Bardi: public and private, exterior and interior, city and building. This liminal or betwixt and between space blurs the limits and provokes that the user-actor transforms it and is transformed by it.

_The Belvedere created over the lower volume of the MASP connects the Avenida Paulista with the Trianon Terrace and the superior volume levitates over without any interruption. This creates a liminal space where the roof of the semi buried volume becomes a plaza, a public space for users to appropriate and enjoy.

_This liminal space also unfolds through the SESC Pompeia by the street along the centre with a designed width that *lets things happen*. People place their chairs or their towels to sunbath. It is not just a street; it is a street that can be appropriated by the user. Here, Lina Bo Bardi preserved the industrial architecture that dialogues with the new concrete volumes penetrated by this liminal street space that generates a vibrant space.

4.3. Disrupted habit



Fig. 3

Transforming the ordinary into the extraordinary is a performative strategy to awake the spectator, to lead him/her to an alert state. There is a collapse between the user/actor apprehended spaces and the disposed ones.

_Confronted to the integration of the semi buried volume that dialogues with its surroundings, the superior volume of the MASP conforms a levitating object. Also, its scale and the red colour of its structure places us in front of the element and makes us question its objecthood. It does not fit any typology we can match. The performative strategy appears in this architectonic context disorienting the user and forcing him to take part.

_A similar strategy takes place at the SESC Pompeia Leisure Centre. The two high concrete volumes tied by the concrete *passages* and perforated by those irregular forms of the windows confront us again with non-traceable references. A window kept apart from its typology remains a window and not a window at the same time. The object is subverted as it is not the regard through the window but the regard of the window itself that keeps the user/actor in an interstitial and oscillating state. Committing to the disrupt effect we remain on alert; the space is not foreseeable.

5. Lina Bo Bardi's take on performativity through design strategies

Through the three characteristics analysed above, it has been detected that active experience transforms the user into an actor, as its actions transform the identity of the spatiality proposed in a self-referenced universe. Secondly, there is a storytelling between the architecture and its user/actor in permanent negotiation. Finally, the disruption of the ordinary confronts the actor/user and leads them to un unstable state that forces participation.

These three categories are not completely independent from each other, the limits between them tend to be diluted because they establish one reality which enables the performativity. This performative dimension unveils both case studies (MASP and SESC Pompeia) as an unstable process, a diachronic event, an *architectural incident*.

Lina Bo Bardi advocates that architecture is a social tool, architecture as an environment for the human being. The humility of her position is to infer that architecture has the limitation of being conceived and carried out in a specific moment and conditions. But its interlocutor, the inhabitant, is changing and the co-creator too of the performativity strategy in its accomplishment. Therefore, in her designing attitude, the architect is necessary but not sufficient for the *architectural incident* to occur.

Tracing the dialogue between the design strategies produces a core finding: these constitutive elements of performativity and the consideration of the user as a co-creator along them, enables to understand Lina Bo Bardi's architecture or any other of her design work as a whole.

Notes

1 Lina Bo Bardi, *Lina Bo Bardi por escrito Textos escogidos 1943-1991*, trans. Paula Abramo (Mexico: Alias, 2014), 193. Author's English translation.
2 Lina Bo Bardi, *Lina Bo Bardi por escrito Textos escogidos 1943-1991,* 164. Author's English translation.
3 Erika Fischer-Lichte, *The transformative power of performance: A new aesthetics,* trans. Saskya Iris Jain (Oxon: Routledge, 2008)
4 Zeuler R.M. de A. Lima, *Lina Bo Bardi* (New Haven and London: Yale University Press, 2013), 144.
5 Erika Fischer-Lichte, *Semiótica del teatro,* trans. Elisa Briega Villarrubia (Madrid: Arco Libros, 1999), 234. Author's English translation.
6 José A. Sánchez, "Dramaturgy in an expanded field", in *Rethinking dramaturgy. Errancy and transformation*, ed. Manuel Bellisco and María José Cifuentes (Murcia: Artea, 2011), 45.
7 Walter Benjamin, *El autor como productor*, trans. Wolfgang Erger (Madrid: Casimiro libros, 2015), 10. Author's English translation.
8 Mara Sánchez Llorens and Fermina Garrido López, Ray Eames y Lina Bo Bardi. El viaje como laboratorio (Madrid: Ediciones Asimétricas, 2018), 93. Author's English translation.
9 Lina Bo Bardi, "Segunda conferencia na EBAU*".* (Salvador, non published: Archivo Instituto Lina Bo e P.M. Bardi, 1958), 2. Reference in Ana Carolina De Souza Bierrenbac, "Entre textos y contextos, la arquitectura de Lina Bo Bardi"*, Arquitextos*, n. 119): 2010. Second part of the note: Denis Bablet, *Adolphe Appia: Oevures completes, Tome III* (Lausane: L'âge de l'homme, 1990), 397. Author's English translation.
10 José A. Sánchez, "Dramaturgy in an expanded field", in *Rethinking dramaturgy. Errancy and transformation*, ed. Manuel Bellisco and María José Cifuentes (Murcia: Artea, 2011), 45.

Image Captions

Fig. 1. Left. Installation view of MASP's Pinacoteca showing works by Brazilian artists (1970). Credit: MASP Archive through Stedelijk Studies. Right. Interior view of the lounge, show and exhibition area with water table. Credit: Sërgio Gicovate.
Fig. 2. Left. General view of the MASP from its plaza (1969). Credit: Han Gunter Flieg. Right. SESC Pompeia. Credit: Instituto Lina Bo e P.M. Bardi.
Fig. 3. Left. Window at the SESC Pompeia. Credit: Hiperestatico. Right. Southwestern view from Avenida Paulista of MASP. Credit: Nelson Kon.

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Urbanization of slums in Brazil and Re-urbanization of housing sets in France
The genesis of a common debate in contemporary strategies for urban intervention.

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Abstract

In the last two decades, social and governmental movements have gained importance for the urbanization of slums and precarious settlements in Brazil and the re-urbanization of large housing estates in France. These are contemporary strategies for coping with the socio-economic problems and the strong urban segregation that these areas present. Resulting, in turn, from the capitalist urbanization process of the second half of the 20th century.
Within the Favela and Housing Complex category, these legacies have the same quality as anti-urbanity. Passive segregation, on the one hand, results from the precarious occupation in the face of an omitted State. And in the other, active segregation, driven by ideological planning and by a centralizing State. Despite being inserted in different realities and historical paths, the work intends to investigate the notions of *urban* and *inhabit* that are activated by these contemporary interventions in these areas.
Study cases are chosen to be studied within the Urbanization of Favela's programs in São Paulo, launched in 2009 (from the Bairro Legal Program, in 2000); and within the National Urban Renewal Program, launched in 2005 (from the Solidarity and Urban Renewal Act, also in 2000), in Greater Lyon.
Followed by the systematization of the philosophical and aesthetic reflection around the notions of the city (qualities of the urban and the inhabiting) elaborated by thinkers from the revision of the legacy of the modern city (both legal and utopian), it was possible to know the debates that nourished the way the architects responsible responded methodologically and formally to these areas, investigating approaches and divergences. Despite different contexts, the answers seem to have the same source of theoretical-conceptual debate.

Keywords: urbanization, inhabit, contemporary strategies, slums, housing sets.

Introduction
By tracing a historical panorama of housing provision in Brazil and France, it is possible to verify, since the 20th century, cycles served either by the private sector or by the public sector, but in quite different conditions of space production. In a simplified way, we can highlight that they are three: the nature of the State to which these societies dialectically form and are formed; the situation they occupy in world capitalism; and access to the property.
In the first, it is possible to consider that, while France can be characterized by a formation of the National State, of “social welfare”, Brazil presents a formation of the “patrimonialist” State. This notion discussed here is referenced in the research of João Whitaker, who, supported by great interpreters of the formation of Brazil, such as Caio Prado Jr., Florestan Fernandes, and Celso Furtado, explains that “the concept of patrimonialism, we could say that it is the form by which the State - understanding itself as all the political-administrative apparatus of governance in the country - has historically been, and continues to be, to a certain extent, instrumentalized by the dominant sectors to benefit their private interests above the collective interests ”, and complements that“ the 'public policies' put into practice in the country, although they are inspired by the ideas of a State that defends the public sphere, as the classic bibliography of political science teaches us, they are not exactly 'public', but rather directed at certain sectors of society, the dominant classes ”(FERREIRA, 2017, p. 13-14).
In the second diverse condition, and still dealing with these authors, they point out an opposition between the formation of National States - like France - “capable of controlling their destiny” (SAMPAIO Jr., 1999) with countries on the periphery of world capital - like Brazil -, which reveals the impossibility of making capitalist development, democracy and national sovereignty compatible, in the face of the expansion of the capitalist world-economy (FERREIRA, 2000).
Finally, the third difference is the issue of access to the property. According to Ermínia Maricato (1997), it was between 1822 and 1850 that, through the wide and indiscriminate occupation of land and the expulsion of small squatters by large rural landowners, the Brazilian latifundium stabilized. Thus, illegality is present in the formation process of the entire Brazilian national territory - although it presents specific aspects in the field - as the root of the national land base - and in the city - where it is a key component in the production process of the informal space, with the slums and precarious settlements, and formal, in closed condominiums (MARICATO, 1999).
However, even in the face of distinct processes of State formation and industrial modernization, the situation in world capitalism and access to the property, in both cases, Brazil and France, we have as a result of the industrialization of the 50s to the 70s the formation of critical urban territories: coded socio-spatial segregation, a fundamental social problem added to an urban fabric that is opposed to the fabric of the traditional city - in France - and legal - in Brazil.
For these reasons, in the last decades, after a long history of social struggles, government programs for “urbanization of slums” and precarious settlements in Brazil and “re-urbanization of large housing estates” in France have gained importance. These are contemporary strategies to face socioeconomic and urban segregation that these areas present, and the answer to them seems in part to have the same source of debate: the premise that recent interventions in both critical territories (*Favelas* and *Grands Ensembles*) start from the notion of what a contemporary city should be, resulted by the critical review of the legacies of modern cities (both real and utopian) held in 1960 and 1970.

1. Formation and urbanization of precarious settlements in brazil: a case study within the slum urbanization program

1.1 Brief historical context
During the 20th century in Brazil, the urbanization process was marked by the expulsion and segregation of the low-income population to the fractions of the discarded cities, at a given time by the real estate market. The occupation of these fractions evolves from individual family initiatives to collective and organized occupation actions from the 1980s onwards, also the result of a continuous restriction of alternative public housing policies for this population. Ermínia Maricato notes that in the 1980s and 1990s, the supply of illegal lots exceeded the sum of legal lots offered in the city of São Paulo. During the 1950s to the 1970s, urban problems were strongly accentuated by the population explosion and the extension of the peripheral urban area due to industrialization and immigration, especially in São Paulo. The long period in which the State has neglected social issues makes Brazilian urban centers truly broad scenarios of exclusion, characterized by informality, irregularity, illegality, and poverty (MARICATO, 2003).
The model used until then was the removal and production of new housing estates. From the period of democratic opening, the “urbanization of slums” by the State represents a possibility to face the issue of precarious housing more efficiently. The appearance of the City Statute in 2001 regulated the principle of the social function of urban land, over private property. But only in 2003, with the Ministry of Cities, urban public policies gained dimension, since land regularization was finally linked to urban regularization, allowing the execution of urbanization works and the implementation of public services

and community equipment, making the right to housing compatible, the recovery of degraded areas and environmental preservation (BRASIL, 2010).
Although advances in public policies for urban and land regularization in precarious settlements are visible from the 1990s onwards, there are few cases of full urban intervention - with the guarantee of the rights to housing and the city. The recent experience carried out in the city of São Paulo has demonstrated the standard maintenance of punctual and disjointed urbanization, both institutional and physical-urbanistic (ZUQUIM, 2012).
Although the times of municipal management are not enough to consolidate programs and projects, nor to create a change in the context of Brazilian urban precariousness, they represent a new and "unprecedented" form of intervention in favelas (ZUQUIM, 2012).

1.2 Case study: Vila Nova Jaguaré, São Paulo

The present case study analyzes the urbanized Vila Nova Jaguaré nucleus, located in the west of São Paulo, close to the University of São Paulo and the Pinheiros River. Its historical and territorial conformation does not differ much from the base matrix of the slum conformation process here already; however, it has specifics. This community grew rapidly, with 3 thousand families in the 70's. In the '80s and 90's the occupation advanced to areas of a great declivity, voids internal to the "blocks", causing greater density. Although several interventions have been moved due to the instability of the slopes, it is only in 2003 that the favela receives projects from the Bairro Legal Program (DOMINGUES, 2015).
The oldest occupations had more consolidated constructions in relation to the wooden shacks of precarious habitability found in the brains of blocks and slopes. The first proposal, which involved responsible architects and residents, provided for the removal of 48% of these precarious houses and the resettlement of families in 1743 units, 745 of which in another area. In the provision of local housing, it was envisaged that the buildings would be projected on the slopes, serving as elements of containment and transition of the land's quota, freeing flat areas for roads and green leisure spaces. New streets and candles would make it possible to face the precarious access of court brains and more adequate ventilation and lighting.
However, in 2005, with the change of municipal management, changes in the project were made, now within the Urbanization Program of Favelas, and the more systemic view of the urban precariousness of this ongoing territory gave way to an intervention focusing only on housing provision.
Also, there was a discontinuity in the quality of the architectural-urban project to what was carried out: the number of housing units within the clipping area was reduced to just two sectors, while the others planned were implemented in neighboring lots. The intention to open new roads and the implantation of a large leisure area was discarded. The final balance was also below expectations, with 1879 families removed, only 942 units were produced, including the number of families relocated to external areas.
In the urban landscape dimension of the intervention, a slope containment infrastructure was implemented, with free recreational areas and access paths from the low to the high level. However, the absence of proposed buildings on the slopes of these hills, in addition to the lack of effective links with the consolidated city, did not drive major changes in the built environment.
Despite these contrasts of intention versus execution, on the other hand, the insertion of the favela in the legal city was guaranteed, incorporating new dynamics, since the residents with their formalized addresses were able to have access to services, financing and strengthened security of tenure, which triggered investments in the area, promoting trade and increasing the value of real estate and land. (DOMINGUES, 2015)
Thus, it was possible to guarantee social rights on the one hand, but on the other, it generated a new type of precariousness: there is a concern among residents regarding the reoccupation of areas free of the slope where the landscaping was implemented.
In this sense, although this project has not achieved excellence due to the discontinuity of municipal management and therefore the programs to which it was inserted, undergoing undesired changes in the intention of urban quality, what was executed of it, and from the analysis of this intervention, it is possible to verify what are the successes and the weaknesses left. They provide a design tool for the following interventions, as in the case of the hypotheses raised by architect Hector Vigliecca, in 2011, for isolated slums in hills and hillsides. The following images clarify the analysis of this intervention and this evaluation.


Fig. 1





Fig. 3



Fig. 4



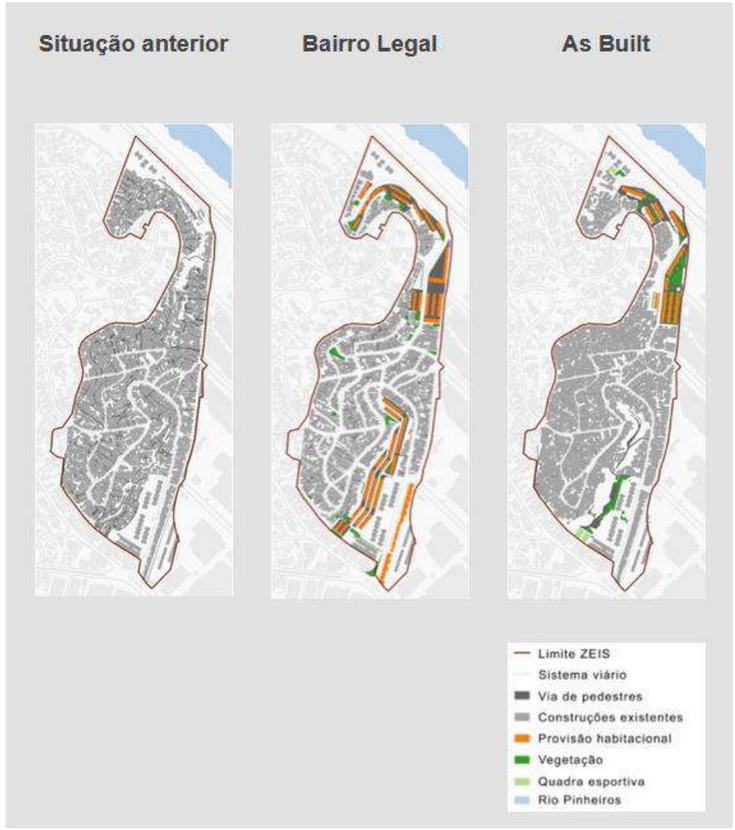


Fig. 6



Fig. 7

2. Formation and reurbanization of the large french housing sets: case study within the grand Lyon urban renewal program

2.1 Brief historical context

The time of the Great Housing Groups (Grands Ensembles), from the post-war period until the mid-1970s, marks the advance of the French reinforced concrete industry and the industrialization of construction, added to the influence of CIAM's ideas and the imposition of norms and standards. standard plans for the apartments. They favor simple geometric shapes, blades, and towers on large plots of land, connected to a highway. The speed of its buildings and the complexity of the financing methods explain the absence of collective equipment that would come late, as well as the common means of transport, in times of the automobile city par excellence. Then there is the transformation of the French periphery that is covered with the new cities, built quickly, from 1000 houses to 10,000 in Minguettes (Vénissieux) and Sarcelles (Greater Lyon region very marked by these operations), to meet the housing deficit crisis caused by the baby-boom and immigration from the countryside and abroad.

The consensual thinking of politicians and architects in the face of modern ideologies made criticism of large groups ineffective. These criticisms, chronic since the 1960s with the emergence of “sarcelitte” (named after Sarcelles) characterized the symptoms as the mental symptoms of boredom, suicide, delinquency, and mainly affected women and young people. Starting in 1968, this tension was amplified. Political leaders were asking themselves about the type of urban society that was built on the outskirts: "how to give soul to these new groups and recreate a community among the inhabitants from everywhere?" (FOULCAUT, 2007).

The death sentence of the policy of large groups is marked by the struggle against social segregation and the housing demand of activist and religious Olivier Guichard in 1973 (DRIANT, 2012). From that period, thirty years marked a series of political efforts in confronting housing provision and social cohesion according to new socio-spatial paradigms in France, as can be seen in the historiographical studies by Annie Foucault, Emmanuel Bellanger, Mathieu Flonneau, and Catherine Grémion.

It is in the years 2000-2010 that the challenges of increasing the supply of housing units reappear and justify the relaunch of projects and programs within the context of the social cohesion plan and in parallel with the return of an Urban Renewal policy aimed at Large Groups of the decades of 1960 and 1970. This confrontation is marked by ANRU (National Agency for Urban Renewal), SRU law of December 13, 2000 (Law of Solidarity and Urban Renewal), CUCS (Urban Contract for Social Cohesion), and Act II of Decentralization (Law of 13 August 2004), which introduces new competences for agglomerations and “departments”, delegating, if they so wish, local and participatory programming of state aid. (DRIANT, 2012).

2.2. Case study: Les Grolières, Vaulx-en-velin, Grande Lyon

The Urban Restructuring Program was established in 1997 by the city of Vaulx-en-Valin, Greater Lyon, and the French State, together with the bailleurs sociaux (social owners), and updated in 2000. In the present case, the district of Grolières was integrated into GPU operations (Large Urban Project) in 1997 due to an emergency: almost unsanitary conditions in certain houses - 25% of units available for rent - urban isolation, degradation of public spaces, and feeling of insecurity.

Executed in four successive phases of work between 1997 and 2005, it aimed to: improve the quality of life of residents by developing public spaces and leisure areas, strengthening social ties and creating public facilities; design the external spaces by opening the neighborhood, protecting the buildings' lobbies, brightening the spaces for public and private use and reinforcing the lighting; improve the residential attractiveness of the district, rehabilitating the housing stock, diversifying housing and strengthening local management.

A new structure was formed from outer space. The demolition of several buildings helped to open the neighborhood by creating new tree-lined crossing streets and parking spaces. Safe and identified pedestrian sidewalks were created, and the public square in the heart of the neighborhood, around the Sala Coletiva Residencial, was rebuilt. The large semi-buried parking slabs were demolished in favor of parking spaces, smaller parking spaces, and spaces along the streets.

The urban restructuring also allowed for the introduction of new functions in the neighborhood: the buildings built in 2005 include equipment for early childhood and two companies were installed in a small commercial area.

Although the area had a large supply of units, 247 houses were demolished in 1997 and 2003. In its place, several buildings were built by the rental company SEMCODA. Totaling 70 accommodations that take different forms: houses, triplex apartments, and traditional apartments spread over collective gardens.



Fig. 7



Fig 8.

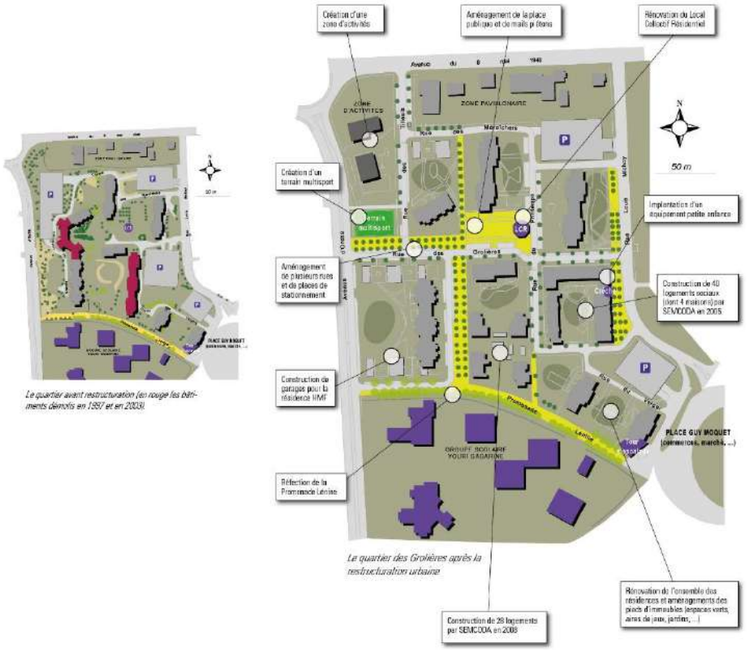


Fig 9.

3. The review of the modern city legacy and the right to the city

From the historical processes reported above, we can see, within the categories of Favela and Grande Conjunto, the same quality of anti-urbanity. One, of passive segregation resulting from the precarious occupation in the face of an omitted State. And another, active segregation, driven by ideological planning, in the face of a centralizing state.

On the other hand, through the correlates, we see how the contemporary search for unity between the scale of local and general significance, as well as a greater identification between the individual and the city (RECAMÁN, 2014: 19) activated by the recent intervention projects of critical areas in Brazil and France, reveals its genesis in the European debate of the 1960s and 1970s.

Thus, we insert the systematization of the third debate: the philosophical and aesthetic reflection around the notions of the city (qualities of the urban and of inhabiting) elaborated by the thinkers from the revision of the legacy of the real modern city since the 1960s. criticisms of the acceptance of the precariousness of large urban areas through housing by people (participation and self-management) on the one hand, and the precepts of CIAM (functionalism of large suburban groups), on the other. How is it possible to extract from each of these lessons a possible conformation of urbanity, and the right to the city, that may have justified the contemporary interventions in these critical areas noted above?

First, the European debate of the 1960s and 1970s aimed to reevaluate the relationship between architecture and the city, after the crisis of modern post-war planning strategies. "The relationship with the existing urban forms becomes the foundation of the expected reinvention of the architectural discipline, in the ideological exhaustion of its alleged abstract and functional autonomy, increasingly restricted to the formal game of the building." (RECAMÁN, 2014, p.16).

In this sense, Frenchman Henri Léfèbvre will study the post-war urbanization experiences and CIAM's precepts as “a hypothesis for the arrival of acquired knowledge and as a starting point for a new study and a new project” (LEFEBVRE, [1970] 2001: 11). His work makes it possible to structure a fundamental thought matrix of the critique of modern urbanism and to foster, at the same time, the contemporary search for possibilities. The author will highlight the process of the technical and social division of labor as the historical roots of this type of practice and ideology. In this functionalist conception whose scope is the reorganization of all social life, the author states that “housing, everyday life (public and private) remain the auxiliaries and annexes of the technical organization of work” (LEFEBVRE, 1970).

Lefebvre bases his main notions on the quality of urban and inhabit, or, the right to the city around the notions of work, urban life, centrality, and differential space. In summary, the work would be the result of collective and cumulative work. Urban life would be the right to enjoy collective fullness, not yet achieved, but as a political horizon. Centrality would have a double meaning and would be both the overlapping expression of urban life and the possible political phenomenon of self-management. The differential space would be the struggle for an urban space that contrasts the capitalist tendency to the abstraction of space in which the use-value is subtracted from the exchange value (LEFEBVRE, 1968).

Contributing to this debate, in Brazil, based on the work “The city as a card game”, Carlos Nelson dos Santos invites us to compare the structure of the city as if it were a card game. The author argues that Cities only make sense through patterns that, at the same time, reveal the world and allow us to perceive it.

For him, the structure of a city is its spatial syntax: spaces are articulated in many patterns that are nothing more than the stylistic combination of fundamental elements. Among these elements, he works with the notion of proportion and relation of lots and blocks, grid, and urban equipment as concepts of structuring for the city.

In this sense, for Santos, modernist rationalism transformed space into discontinuity, fragmentation, discomfort, and insecurity and ended up destroying the notion of place and highlighting an infinite void. The complementary antitheses that rationalism endeavored to confuse and deny are, in postmodernism, the “answer” to the questions. The street appears as a fundamental element for the understanding of urban life (SANTOS, 1988).

In the Brazilian context, Santos also evokes that one of the major problems in the structure of our cities is the fact that models of space occupation always come from outside, from the so-called “higher sources”. Brazilians have not come to identify better with cities; on the contrary, they discovered molds capable of framing dispersed ideas.

In contrast to these analyzes, we return to the specific case of the Brazilian periphery. In the chapter “the periphery as its own” of Gisela Barcellos' thesis, we found a debate around the search for the definition of what would be called “Periphery Architecture” - evidenced in the V SAL.

On the one hand, the author reports that while the periphery was seen as a result of accelerated growth of dependent urbanization, on the other there was the idea of a type of urbanization that would generate a specific habitat. The resonant ideas circulated around the search for an urban-architectural theory specific to the Latin American city that has little relation to the structure of thought about an urban model shaped by European thinkers like Aldo Rossi. In this sense, the author explains that bricolage on the urban periphery as a distinctive and specific feature of Latin America, therefore, should have its origin in the direct observation of cities in the subcontinent. (BARCELLOS, 2010).

Within this search, the full and empty studies carried out by Hernán Duval gained prominence. According to his findings: the voids present in these peripheral areas and precarious settlements would be “typical of paths that were conceived as inter-communal or interurban road solutions, around which dormitory areas are installed that are implanted as independent units from each other without existing civic space that relates them and gives them the meaning of the city ”. (DUVAL in BARCELLOS, 2010: 289).

In this study, we can observe how, in opposition to the infinite emptiness of the rationalist city of CIAM, the periphery reported here would present the absence of urban continuity that would guarantee a civic sense.

In opposition to this, Barcellos de Souza reveals that “John Turner's studies carried out between the 1960s and 1970s on self-construction and the constitution of marginalized fabrics by the residents themselves were widely reported in the books he published and in specialized magazines as an alternative and not a problem. In the specific case of Brazil, there is also the work of Carlos Nelson Ferreira dos Santos who contributed widely to the development of this theme.” (BARCELLOS, 2010: 280).

In contrast to these revisions of the models of urban utopia in force around 1965, which ranged from 'nostalgic' to 'prophetic' (NESBITT, 2006), we return to Cacciari. He argues that although we must find this organic correspondence again, it is impossible to do it by proposing a traditional form of urbis.

For him “we must‘ invent ’correspondences, analogies between the post-metropolitan territory in which we live and buildings, places where we can live; we must ‘invent’ buildings that are places, but places for post-metropolitan life, places that express and reflect the time, movement (...) The shape of the whole in relation to each part. ” (CACCIARI, 2004 [2010]: 59).

It is this essence that moved Colin Rowe and John Koetter to propose the notion of “Collage City”. A fragmentary method as a solution for the contemporary city: “the city-collage could be a means of admitting emancipation and allowing all participants in a pluralist situation its legitimate expression” (NESBITT, 2006).

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Conclusion

Although intervening in contrasting scenarios, planned functionalization and unplanned segregation share productive logic, resulting in deep socio-spatial segregation, resulting from modern legacies of the real and utopian city. Thus, both the projects included within the New French National Urban Renewal Program (NPNRU), as well as within the “Urbanization of Favelas” program, are based on the demolition of houses of a deterritorializing scale - French case - and of unhealthy homes - case Brazilian - as a basis for reconfiguring an integration of urban elements.

In addition to the functional issue, there is a search that permeates a sense of inhabiting these interventions, and the urban qualification of the resulting spaces.

In the French case, the strategic demolition of stigmatized housing blades and the reconstruction of new ones are the basis for urgent measures to improve the diversity of housing supply and urban quality, the scale of public spaces, the mix of uses stimulating commerce and the economy, insertion of equipment and services, reinforcement of centrality added to the connection with the big city.

In the Brazilian case, the demolition of unhealthy shacks between the blocks and slopes is seen as a measure of safety and health. In addition to the necessary removals to open roads that legally and functionally connect to the legal city, combined with the creation of public spaces, leisure, and social areas, insertion of equipment, transport, and access routes. Thus, the demolished units are replaced, even if in insufficient numbers, by residential buildings at the intervention site, which can even play the role of transposing quotas or structuring slopes.

The discontinuity of municipal management in the Brazilian case also does not guarantee that the works often meet the initial intention of the project, to guarantee the qualification of the urban and full living, and the scarcity of housing units becomes the sole objective.

Also, the fact that removals in Brazil represent a challenge for environmental action and risk remediation in precarious tissues. A constant dispute between environmentalists and sociologists.

Anyway, be it in this fragmentary method that brings opposites together with the possibility of plural and legitimate expression: that meets both the civic void expressed in one model, and the reference of street and community in the other, with diversity and patterns that we can identify, occupy and belong.

Thus, it is evident, throughout the research, how both situations work, in essence, for responses to socio-spatial crises in the real modern city encoded in Brazilian slums and large French housing estates. They have a recurring discourse of the search for a broad understanding of the concept of the city, urban and inhabiting, arising from a common debate on revisions of the modern legacy.

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Imagen Captions

Fig. 1 Vila Nova Jaguaré before the intervention. Source: favelassaopaulomedellin.fau.usp.br

Fig. 2 during the intervention. Source: favelasaopaulomedellin.fau.usp.br

Fig. 3 Project Plan of Vila Nova Jaguaré, and photos after the intervention. Source: boldarini.com.br

Fig. 4 Vila Nova Jaguaré after the intervention. Source: boldarini.com.br

Fig. 5 Vila Nova Jaguaré after the intervention. Source: Migual Bustamante in favelasaopaulomedellin.fau.usp.br

Fig 6: Vila Nova Jaguaré in a previous situation; with a project planned under the PMSP's Bairro Legal program, and after as built, with a modified project in the PMSP Urbanization of Favela's program. Source: favelasaopaulomedellin.fau.usp.br

Fig. 7: Grolière before the renovation. Source: media library at gpvvaulxenvelin.org

Fig. 8 Grolière depois da renovação, vista do observador do imóvel da residência da SEMCODA. Fonte: midiateca em gpvvaulxenvelin.org

Fig. 9 Completed projects - Living environment and urban renewal - GPV3 – Les Grolière. Source: gpvvaulxenvalin.org

Between the sky and the ground.
Architecture under the paradigm of Schopenhauer and Rajchman.

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Abstract

The present paper promotes a dialogue between Architecture in the philosophy of Arthur Schopenhauer and John Rajchman. We seek here to deepen the concepts presented in the texts and thoughts of the authors, having as theoretical corpus the texts “The world as will and representation”, especially in the third book in which he develops aesthetics, by Schopenhauer (1819) and “Constructions” by Rajchman (1997). From the analysis and deepening about the Schopenhauerian concept of architecture as an art of overcoming heaviness or gravity and the resistance of matter, and from the lightness of Rajchman's folded architecture, we can confront and relate, in a dialogical exercise, ideas about the ground, geometry, spatiality, matter, weight, objectivity and subjectivity and their implications for the architectural concept and its consequent daily practice. When confronting these two positions, these two paradigms, we aim to observe and question possible concepts of architecture that reside in between and can respond to contemporary architectural practices, a practice between the sky and the ground, the material and the immaterial, the real and the virtual. Finally, the present study intends to promote, in a theoretical way, questions of possible architectures for the 21st century based on canonical statutes and their confrontations in new contexts.

Keywords: ground, lightness, Rajchman, Schopenhauer, architectonical philosophy.

1. Writing architecture: the relevance of philosophy

Writing about architecture, we run into the problem of understanding your place in the discipline, your real relevance, your potentials implications, and applications. For many architecture is about what is built, is the object, or the series of objects that surround us and form our concrete world, and the writing don’t pass from an approximation, image of what is to come. An imaginary space in which architecture does not realize.

> *There is no way to perform architecture in a book. Words and drawings can only produce paper space, not the experience of real space. By definition, paper space is imaginary: it is an image. (Bernard Tschumi 2013, p. 581.)*

The conceptions surrounding the relations between theory and practice seem to keep reassuring a distinction between both beyond establishes a hierarchy in which the theory serves to practice – a Platonical heritage that inversely makes the object more important, as a necessary result of the ideal process of a project. This does not mean that the text has not his value in architecture – from Vitruvius to the postmoderns and contemporaneous we noted your relevance, however as an instrument of intellectual elucidation before what will be built. However, nowadays, in a world increasingly bombarded by images and media, the text seems to have been eradicated from architecture, also taking its depth.

If we followed this logic, we would see abundantly restrict our place of speech, as the functions of architecture writing and its implications. We would always be inmates thinking the theory for a practical purpose. But rather than this, we might understand the writing in architecture by another paradigm, to free its total potential. Turning the writing architectonical. In your text “Writing architecture” of 1993, Michael Speaks shows us this path. We need to understand writing not in your being, but in your action, as the author says, “writing becomes architectural by producing architecture.”[1] What emerges from this, is that architectonical writing is a type of writing rather than aid, being part of the building. It does not aim to approach the building through writing, to carry out critical or theoretical writings on architecture and architecture, but to produce architectures. A relationship that blurs the edges between theory and practice.

In a sense this posture seeks to reposition architecture epistemologically in the face of western knowledge split between body and soul, pathos and logos, abstract and concrete, outlining an inseparability between idea and action, and thus giving aesthetics a character not only ideal or material, but proposing an encounter and, thus, giving philosophical quality to architecture and architectonical writing.

> *This encounter, therefore, gives both a philosophical status to the construction activity and distrusts the logos that are content only to move through the world of ideas and are not experienced in actions. This inseparability between ideation and edification corresponds to the inseparability between soul and action and only legitimizes in the work that which is put “in work” (BRANDÃO, 2005, authors translation).*

Such a quality now gifted to architecture gives us the possibility to investigate the relationships between disciplines, to investigate the philosophical in architecture and its reverse. Didi-Huberman says that the philosophical gesture corresponds to two stages, first the astonishment about something, the exclamation, second, and no less important, the interrogation.[2] The architectonical writing! The architectonical writing? Is the constant reflection that philosophy realizes of the non-philosophical experiences from where it derives its restlessness, its ‘objects’.

> *Philosophy is reflection on a non-philosophical experience. [...] The non-philosophical experience is close enough to philosophy so that it finds an audience in it, inspires restlessness, and ends up transforming it as philosophy. (De Waelhens apud Moacyr Laterza, 2001 p. 15)*

In other words, we can understand that architectonical philosophy or a philosophy of architecture is based on two pillars, primarily for the philosophical status intrinsic to the discipline, and secondly, by the character of a non-philosophical object that exclaims and interrogates reality, placing the discussion in a flow between disciplines. Questions that unfold between philosophical paradigms and concrete realities. In a physical and metaphysical fog.

Is under this context that this present paper inserts the analysis of the paradigms of Artur Schopenhauer and John Rajchman, in a field of architectonical writings, architectonical philosophies.

2. The Schopenhauer/Rajchman opposition

Several philosophers sought to understand the architecture or included it, directly or indirectly, in your philosophical systems – Aristotle, Leibniz, Heidegger, Derrida, Deleuze, Foucault, and others. As for how architects that in your projects seemed to produce philosophical buildings – Bernard Tschumi, Peter Eisenman, Bernard Cache, Greg Lynn, and others. Is it in this disperse context that emerges Artur Schopenhauer (1788 – 1860) and John Rajchman (1946).

Thereby, it is clear that the philosophical question of architecture does not present itself as a cohesive problem, opening up to varied possibilities of methodological and analytical cuts. Therefore, it is necessary to realize the potential of the cut choice that this paper as the context that justifies it.

Be it from the perspectives of phenomenology (Schulz, 1976; Pallasmaa, 1986; Frampton, 1974), from the School of Venice (Gregotti, 1985), to discussions about the virtuality of space under the paradigm of post-structuralism (Lynn, 1995, 1998, 2008; Cache, 1995; Solà-Morales Rubió, 1997) the question about ground and territories involves not only the contest about the architecture essence, as your relations with physics, gravitas and the subject it includes. The Schopenhauer/Rajchman opposition emerges from this place, where the debate enfolds not only the very being of architecture, your status, and quality, as the theoretical field about ground, territories, and frontiers that subscribe the discipline. Is in the connection between the relations of architecture and matter and the idea of architecture as art that subscribes to the thoughts of the two philosophers and allows us to connect then.

So, the present paper searches to articulate the architecture's thoughts under the paradigms of Artur Schopenhauer and John Rajchman showing your distinctions and relations through the ways that each one connects architecture and the matter by the ground and gravity. Thus, first, we will outline Schopenhauer's view of architecture, second the look of Rajchman's for then establish your relationships and differences to end with the final considerations.

3. About Ground: the paradigm of Schopenhauer

Artur Schopenhauer (1788 – 1860), a German philosopher of the XIX century, distinguishes himself from the western tradition in your pessimistic look about life and the emphasis on the will, at the expense of the intellect, in his portrait of the mental constitution.[3] Appropriating and differentiating from Kant's philosophy Schopenhauer inscribes a singular philosophy about life, subject, and art.

It is well known that the philosophy's produce by the German is characterized by the Will, the world as Will, your essence, support, the immanence of the world, as is explicit in his seminal work The World as Will and Representation (1819). In it, he regarded human beings as embodiments of will. For him, the will was "the substance of man, the intellect the accident."[4] However, it is in Metaphysics of the Beauty – a set of lectures read by the philosopher in 1820, at the University of Berlin – that the apex of Schopenhauer's thought is discovered, being the safety mode to understanding the world's essence.[5] Thus, the aspects of architecture are showing in the crosses between these two works. In The World as Will and Representation, the philosopher dedicated the third book to aesthetics where examine the art form, through it, explains the essence of things.[6]

In this way, Schopenhauer's paradigm will note a world in which everything is about the subject, existing for the subject. "The human being ultimately becomes the frame of reference for everything".[7] And knowing the world, your objects are always in a relation to the will, our desires, and interests. Therefore, the primally know about the world is a subjective way instead of an objective. However, the German, do not accepts the contrast between inner subjective and external object, rather understand both as interdependent. The ways between Will and Representation. In this sense, "the whole phenomenal world, all empirical reality, is the outcome of will's objectification."[8] And the knowledge of art will be as of the Ideas, "both being grades of will's objectification"[9] being the art a way to the ideas.

"The aesthetics of Schopenhauer is based on his three major philosophical concepts: the will, the Idea, and the pure subject of knowledge."[10] Therefore, your think takes us to a paradigm in which the ideas show themselves easily by the works of art, making us observers and dislocating from the reason, suppressing the subject and the object, leaving only the objectivation of will.

> *"The famous Schopenhauer's definition introduces us in the at the core of your aesthetics. Art's philosophy depends on a global reflection about life and about men, this doctrine is centred in the idea of contemplation" (Brum, 1998). In metaphysics of the beauty's conception, the subject is destitute of Will and suffering. Thus, in contemplation of art, men pass from actor to observer, this no longer acts in the world, just contemplating it, is a way of comfort towards the suffering and the essences of the world, the Will. (FONTANA, 2005, author's translation)*

Thus, Schopenhauer makes a hierarchization in a way that those which better express the objectivation of will, in other words, the higher arts are those more emancipating "from the exigencies and necessities of practical life and gain a temporary release from suffering."[11]

In this system, architecture will take the lowest place because your need to borrow objects of the world, distancing itself from the ideas. For the philosopher, architecture has "no purpose other than that of bringing to clearer perceptiveness some of those Ideas that are the lowest grades of the will's objectivity"[12], and thus, includes "the most universal qualities of the stone, such as gravity, rigidity, cohesion, hardness."[13]

Is under this context that architecture will be an "art of burden and support, an art of the spirit of gravity"[14], explicit the dwelling between gravity and matter. In this sense, Schopenhauer will say that the mass of buildings tends to return to earth, yielding to the force of gravity. The struggle is justly in the forces that the building exercises to keep itself up and cohesive. This is how the problem of architecture is related to make visible this conflict "by depriving these indestructible forces of the shortest path to their satisfaction and keeping them in suspense through a circuitous path."[15] This makes architecture not as art with meaning or function, but rather as that which turns visible the forces of nature, and so, located in the lowest stages of art, of will's objectivity. In the meantime, architecture remains as art, since it does not copy nature, but completes it.

So, however much in Schopenhauer's metaphysics of beauty, the distances between subject and object are suppressed, architecture being the lowest form of art escapes of this logic dealing more with the ground, the territory, marking the forces that institutes and identifies the subjects, subduing to the frame, to the gravity, in a battle that never ends. Being subject to gravity, supporting it, Schopenhauer's views will approach features such as rigidity, symmetry, weight, equilibrium, in a way that "the aesthetic aim of creating the ideal visual solution to the conflict between rigidity and gravity is resolved"[16], as in the classical architecture.

While Schopenhauer believes that the classical architecture is the image of architecture's beauty, in his ways to resolve the dwelling between gravity and rigidity, stills breaks with the Vitruvian tradition, when he "refutes the idea of deriving architectural proportions from models found in nature"[17], instead, the issues of the form will only be discussing in the terms of structures, how they load and support. In this sense, appears that the architecture's aesthetics respond more to an abstraction's vectors than natural objects, however in the essence is the materialist constraints of architecture, under Euclidean geometry and Newtonian physics.

4. About Sky: the paradigm of Rajchman.

John Rajchman (1946), an American philosopher, inscribes your thought in a look to French thinkers as Foucault, Deleuze, and Derrida – Michel Foucault: The Freedom of Philosophy (1985), The Deleuze Connections (2000), French Philosophy Since 1945: Problems, Concepts, Inventions (2011), besides dedicating to art and architecture, understanding this last as an exchange medium that allows "a better sense of how philosophy might work in a global extra-academic setting."[18] Thus, through your texts, – as in his partnership with Any Magazine nº 5 (1994), nº 12 (1995) e nº 19/20 (1997) – conferences – also for Anyhow in Rotterdam – and in a more developed and mature way in the book Constructions (2000), delineates a look that went through architecture deeply, arguing about yours pragmatical, critical and formal functions in a thought that aligns theory and practice.

The context of the decade of 1990 imposes Rajchman problems that seek to move forward from the greats established systems by western modernity in a way to turn them more flexible, searching for possible new images, signs, and meanings.[19] Ergo, it is about conditioning a critical look that connects past, present, and future.

Concerned with the endgame of this pitiless century, and especially the end of a world brought about through global "teletechnologies" of action at a distance, John Rajchman's philosophy occupies the privileged space of this back-and-forth trajectory, from here to there, from one side to the other. [20]

In this state, Virilio will add that it not only says about the end of history, as also to the end of a geographical world whose ancient distances of time once instigated the distancing of presence.[21] Thus, to deal with the endgame – of time and space – Rajchman will insert the doubt, starting "from the idea that we are singular indefinite beings"[22] opening new possibilities elsewhere from the Kantian problematic as orders seminal thoughts that establishes a regular, controlled and static world.

Rajchman in his short text Dancing and building in the nº 5 ANY magazine says that architecture besides dance is concerned with gravity. Following Mark Morris who says that "Everything is gravity", the philosopher inscribes the discussion about architecture in the field of materiality and immateriality, of weight, and of the earth itself.

In another way than Schopenhauer's, the American seems to release the architecture from his weight in a sense to understand the proposition of diverse architects from the modern to the postmodern, taking a risk in a more mobile and flexible way.

Today we are perhaps confronted with a somewhat different question. It is not a matter of the earth's ground and the weight and materiality of tradition, region, or context. It is rather a question of another conception of the earth itself and its materialities, no longer separated from the city or caught in the opposition between artifice and nature – the question of new geology, where the earth is no longer

seen as what anchors or grounds us, but what releases amid our multiple material manners of being other light dynamic spaces.[23]
Refusing the earth as the “Husserl’s original “arche-ground” of a flesh that centres, orients, and frames all our experience before geometry and physics,”[24] or Heidegger’s ““native ground” – the ground “on which and in which man bases his dwelling.””[25] the philosopher forward Zarathustra the philosopher summons up to rename the earth to be called light. Therefore, all boundaries must be sent flying and the deterritorialization takes place, breaking the frame and unlashing the architecture from the Euclidian and Newtonian paradigms. It is weightless earth, in which builds dance and encounter the middle as a place of potential, creation.

> *the earth becomes light when one can say, “the middle is everywhere, the path to eternity is crooked,” and when instead of learning to orient itself upward, the soul learns to trace another, light sort of movement, a multiple displacement along the surface, a sort of dance. For the earth is heavy, schwer. But to fly is not to remain above this heaviness or gravity, as though one were living in a house on stilts. It is to know how to lighten the earth itself, as though one were inserting oneself into it like a surfer in a wave. (RAJCHMAN, 1994b, p. 13)*

In this sense, light does not oppose itself with the earth but denotes another concept of the earth where “lightness is asked to “come out” – out from the grid frame of its glasshouse to move in a freer space, where there exist other possibilities of release from tradition”[26] and asked for architecture new concepts that is deal with the material and immaterial of lightness and freeing architecture from the ground.
So, “lightness may then be thought of as a release from the traditional burden-support space of architecture”[27] in a manner that changes in new directions, of mobile, rhythmic, of formless space. “The function of lightness thus is found in a certain ease or freedom in movement”.[28] In this manner, and taking advantage of the modern revolution, architecture barely touch the ground in an “ungrounded” movement being “freed from the “weight” of tradition” as becomes an “abstraction” of forces that cross us, rather than be a response of a milieu, of a natural territory that pushes the architecture, establishing relations as figure/ground, foreground/background.

> *Ungrounded movement is then the movement that is no longer bound to move from one fixed point to another but rather traces its own unbounded space through the trajectories or paths that it makes. (RAJCHMAN, 2000, p. 85)*

The Rajchman’s paradigm moves architecture, making she dance in the earth and scaping the frame as “that serves as an antidote to a melancholy immobility.”[29] Conquering the gravity, the subject as architecture can open itself to other forces, vectors, and crossings beyond the Cartesian space, the Euclidian geometry, or Newtonian physics. A dynamic that Virilio will call ““trajectivity” before our subjectivity and objectivity.”[30] In a sense, is a way of seeing differently not only architecture but the whole aspects of being, that requires a sense of indetermination.

> *We must see ourselves as vague or indefinite beings before the fixed qualities that tie us to grounds or lands, and so as beings always able to be released from such qualities. For there are always points in our lives where we may move away from such grounds or identities on a kind of uncharted voyage, which form part of the multiple geographies and landscapes that make us who we are as corporeal beings. (RAJCHMAN, 2000 p. 86)*

The American philosopher open the world to infinite possibilities as Deleuzian’s Leibniz. He unfolds the potential, the movement, turning the earth light in a continuous space with new geometries that emerges from other kinds of movement and form, no longer fixed as definitive objects given to unchanging subjects grounded in the earth.[31] “For when a form is no longer determined by a prior field or ground given to an independent or overseeing eye, it starts to operate in other, less systematic or predictable ways.”[32] Opening new possibilities of building that are to come, to respond philosophical and tectonically to the subject and the architecture.

5. Between the sky and the ground.
Between Schopenhauer and Rajchman it is noted a distance like between the sky and the ground. However, in this distance we can find a meet in the horizon, not only in the subject that the two philosophers deal in architecture, having to do with gravity, but also in the origin of your thoughts, a point of differentiation of the Kantian proposes of the world of art and the world itself.
Also, the sky and the ground show us the two different vectors that each one delineates in your views of architecture. In distinguished ways the two paradigms bring perspectives that cross each other, dealing, in the end, about the same thing, an architectonical philosophy that seeks to locate the discipline and the questions about it through physics and metaphysics. Offering principles that involve architecture making it deep.
In this way, we could see in Schopenhauer an architecture that is about the struggles between the matter and gravity, an “art of overcoming heaviness or gravity and the resistance of matter.”[33] The German paradigm inscribes the architecture in a close system under the gravity and forces that frame it. Being a lowest art, that only turns visible the forces of gravity and rigidity and can be best manifest substantially and materially. A grounded architecture.
On the other side, Rajchman brings the concept of lightness in a way to release the architecture and the subject of the ground. Making it move, dance, away from the frame, in a virtual technological world, where the boundaries are more and more blurred. Understanding architecture as a complex labyrinth where are many ways to do it. Ways of freedom, virtuality, and lightness.
So, between the sky and the ground can be delineated an opposition not only about architecture such as about the subject and the world itself. It is a change of perception that moves into the direction of a more profound understanding of the contemporaneity in its problems that involve architecture. In a place that there is no place, where the boundaries are more and more blurred but that remains dwelling with the ground in a sense of maintaining the history, the ground, the identity. In this sense, it seems to us, that the question is not which one paradigm is valuable in our days but understand that both constitute the whole being of architecture and subject and that the struggle between the ground and sky is what constitutes us, the battle between identity and singularity, the desire to be free and fly as to be safe in the ground, in a continuous problematic between two different paradigms but still inseparable.

6. Conclusion
Lastly, this present paper sought to investigated architecture by philosophy, in a way of architectonical writing or architectonical philosophies. Starting from the principle that Schopenhauer and Rajchman offer us paradigms and thoughts inside this idea of architectonical philosophies as also subscribes itself under the understanding of the architecture of gravity. In this way, we proposed a distinguished read that in a dialectical exercise enables us to trace connections and opposition in a form to make a larger theory about architecture and gravity, about building between the sky and the ground.

Notes

1 Speaks, *Writing in Architecture* (ANY: Architecture New York, 1993), 6-7.
2 Didi-Huberman, *Que emoção! Que emoção?* (São Paulo: Editora 34, 2016).
3 Tanner, *Schopenhauer: metafísica e arte*. São Paulo: UNESP, 2001), 5.
4 Korab-Karpowicz, *Schopenhauer's Theory of Architecture* (MA.: Wiley-Blackwell, 2012).
5 Fontana, *Metaphysics of beauty according to Schopenhauer* (Acta Scientiarum. Human and Social Sciences 27 (2008).
6 Ibid.
7 Korab-Karpowicz, *Schopenhauer's Theory of Architecture* (MA.: Wiley-Blackwell, 2012).
8 Ibid.
9 Fontana, *Metaphysics of beauty according to Schopenhauer* (Acta Scientiarum. Human and Social Sciences 27 (2008).
10 Korab-Karpowicz, *Schopenhauer's Theory of Architecture* (MA.: Wiley-Blackwell, 2012).
11 Ibid.
12 Schopenhauer, *O mundo como vontade e como representação, 1º tomo."* (São Paulo: Unesp, 2015).
13 Korab-Karpowicz, *Schopenhauer's Theory of Architecture* (MA.: Wiley-Blackwell, 2012).
14 Rajchman, *Constructions* (MA: MIT Press, 2000), 40.
15 Schopenhauer, *O mundo como vontade e como representação, 1º tomo."* (São Paulo: Unesp, 2015).
16 Korab-Karpowicz, *Schopenhauer's Theory of Architecture* (MA.: Wiley-Blackwell, 2012).
17 Ibid.
18 Rajchman, *Interwiew* (2015).
19 Rajchman, *A New Pragmatism* (MA: MIT Press, 1998).
20 Virilio, *Foreword* (MA: MIT Press, 1996) viii.
21 Ibid.
22 Rajchman, *Constructions* (MA: MIT Press, 2000) 1.
23 Rajchman, *Light Matters*. (ANY: Architecture New York, 1994), 28.
24 Rajchman, *The Earth Is Called Light* (ANY: Architecture New York, 1994), 13.
25 Ibid. p. 12.
26 Rajchman, *Light Matters*. (ANY: Architecture New York, 1994), 29.
27 Rajchman, *Constructions* (MA: MIT Press, 2000) 40.
28 Ibid. p. 42.
29 Rajchman, *Dancing, and Building* (ANY: Architecture New York, 1994), 36.
30 Rajchman, *Constructions* (MA: MIT Press, 2000) 85.
31 Ibid. p. 94.
32 Ibid. p. 107.
33 Ibid. p. 78.

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Towards an Embedded Urban Design in Olympic Parks:
London 2012 and Rio 2016's Legacies

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Abstract

In 2016, South America hosted its first Olympic Games, in the city of Rio de Janeiro. The megaevent implied an opportunity to rethink and rebuild the city's urban environment, including the creation or improvement of public and leisure spaces. Among the urban transformations incurred, the new Barra da Tijuca's Olympic Park stands out, aimed at becoming a neighborhood in legacy mode.

Such strategy had been used by the predecessor Olympic city, London, which proposed as part of East London's regeneration a series of masterplans that transformed the 2012 Olympic Park into a set of mixed-use neighborhoods after the Games. This undergoing process has created a bustling, varied area in the city, with public spaces and high-profile sports venues amidst mixed-use developments. However, completion of the legacy mode in Barra da Tijuca's Olympic Park has not followed the same path: because the transformation has not adhered to the original 2011 legacy masterplan and due to problematic governance and continuity of plans after 2016, the complex is a void, underutilized public space.

This paper employs a methodological approach to the comparison between two emblematic case studies of using the Olympics as a propeller of urban transformations – the London 2012 and Rio 2016 Olympic Parks. It contrasts Urban Design strategies applied in both examples in terms of physical attributes of the built urban environment – mixed-use, morphology, typologies, connections –, and governance – public-private partnerships and implementation of legacy.

As a result, the research emphasizes that besides better organization and efficient administration in the London process, design aspects also have played an important role in the conversion of such Olympic spaces. Together, the analyses contribute to a dual understanding of Urban Design both as a process and a practice and assert the need for an embedded Urban Design in the conception and implementation of large-scale urban developments.

Keywords: Olympic parks, urban design, legacy, Rio 2016, London 2012.

1. Introduction: Urban Design and the Olympics

Olympic Parks are one of the most noticeable tangible legacies[i] of the Olympic Games. As a cluster of highly specialized, extraordinarily scaled venues and spaces, they pose a compelling challenge in terms of converting their void spaces into a cohesive public space for legacy uses, as well as integrating their premises into the existing urban fabric[ii].

In consonance with the legacy and sustainability agenda, which first gained momentum throughout the 1990s after the success of Barcelona 1992, including a revision of policies and specific requirements in the Olympic Charters by the IOC, London presented a significant change in how it planned the main site of the 2012 Olympic Games. Its bid proposed a set of Games-mode and Legacy-mode masterplans, highlighting an early concern about the legacy that set a new benchmark for the design and planning of Olympic Parks.

Such approach may be seen as part of a broader revision of the model of Olympic Games: either by shifting from a "clustered" megaevent with venues in Olympic Parks into a more sprawled one (see Paris 2024 plans), or, as London did in 2012, by converting the Olympic Park open spaces into varied mixed-use neighborhoods. Rio de Janeiro followed London's example and proposed the conversion of the 2016 Olympic Park into a new neighborhood according to a masterplan chosen in a design competition in 2011. However, since transformation did not adhere to the original 2011 legacy design masterplan, and due to problematic governance and continuity of plans after 2016, the complex has become a void, underutilized public space.

The design aspects involved in both legacy transformation masterplans for the Olympic Parks in Rio and London relate to an internationally recognized need to change from functionalist planning into human-scaled, mixed-use urban environments – which stem from the emergence of *urban design* as a disciplinary field in the 1950s and 1960s, with influential texts by Jane Jacobs, Gordon Cullen, Kevin Lynch, and Jan Gehl. Urban design, while autonomous from planning and architecture, yet deeply involved with both fields, has evolved in the last sixty years more as an interdisciplinary "frame of mind" for thinking the urban environment than as a technical discipline[iii].

As such, the literature discusses urban design both as a practical design act and a process for making cities (both by designers and society – in a dual relationship), in which the physical attributes of space influence social cohesion and interaction as well as governance issues such as inclusive methods for decision making and further balance between public and private sectors.

This paper argues that *urban design*, both as a *practice* related to shaping the built environment through morphological and typological choices and sediments as well as a *process* developed over time by different stakeholders, including but not limited to planners, architects, governors, users, dwellers, and contractors is crucial for consolidating a compelling legacy in Olympic Parks and integrating them in the urban tissue.

2. Methodology

The methodological approach employed in this paper establishes a comparison between two emblematic case studies in which the Olympics catalyzed urban transformations – the London 2012 and Rio 2016 Olympic Parks. Based on a selection of criteria from urban design literature deemed as beneficial to the creation of good quality urban spaces, the analysis will contrast urban design strategies applied in both cases in terms of physical attributes of the built urban environment (practice) – *mixed uses*, a somewhat dense, fine-grained urban form (relating to *morphology* and *typologies* of a place), good *connections* through public transport and green mobility – and *governance* issues (process) – public-private relation and implementation of legacy (see Table 1).

The next two sessions will analyze each case individually by providing a historical contextualization, followed by a short analysis of the urban design strategies, supported by a series of photographs taken in loco during visits in 2016 and 2019.

3. London 2012 Olympic Park: new pieces of the city

The Olympic Park is located in a former industrial site in East London, belonging to four different boroughs[iv]. The success of the bid in East London relates to a process that had begun with two other major regeneration schemes in the broader region, the London Docklands (1981) and "Thames Gateway" (1994[v]) developments[vi], as well as important urban transformations on the adjacent area of Stratford: the rerouting of the CTRL through Stratford and subsequent opening of an international station[vii], the extension of Jubilee Subway Line with Stratford as an end station (2000), and the 1990s renovation project "Stratford City".

The process of conceiving and designing the Olympic Park involved several different masterplans developed between 2003-2010. In 2003, an appointed consortium[viii] developed a first masterplan for the London 2012 planning application, comprising a larger area than the actual Olympic Park and presenting "muscular buildings" on a predominantly flat site[ix]. This plan would be revised in 2006 and again in 2008, when the London Development Agency (LDA) nominated a new design team[x] to develop the "Legacy Masterplan Framework" (LMF), a document that established guidelines for the future redevelopment of the park's vacant areas. As a framework, rather than a "rigid blueprint for

development"[xi], it provided a degree of flexibility to the long-term regeneration process, while maintaining an overall cohesion and adherence to intended urban design strategies and visions for the new neighborhoods. The 2008 masterplan also presented new landscape features, including a new topography and higher-quality green spaces, which enhanced public spaces and created visual interest. Nonetheless, this masterplan still had a rather homogeneous appearance, lacking a local personality matching the British architectural and urban tradition. Hence, it was revised once again in 2010 as part of the London Communities Scheme (LCS), a document prepared by the Olympic Park Legacy Company (OPLC), approved in 2012. Designed by nine practices, the LCS masterplan guided the legacy urbanization of the Olympic Park into five new neighborhoods[xii], each with its urban character, becoming different urbanities or "pieces of the city"[xiii].
In 2012, the Mayor of London created the London Legacy Development Corporation (LLDC), which replaced OPLC. The LLDC aims to promote a complete regeneration of the Olympic Park and its surrounding areas, following the principles of sustainable urban development and design. The LLDC acts as a Local Planning Authority for the Olympic Park redevelopment areas and, as such, is responsible for preparing a Local Plan (the current version spans from 2020-2036)[xiv], a document that lays out the corporation's strategy for sustainable development of the whole site and its sub-areas. This local plan replaced the former adopted local plans of the four boroughs within the LLDC area and established the LLDC's strategy for the development of the area as a whole.

3.1. Urban Design as Practice in London's Queen Elizabeth Olympic Park

The five neighborhoods are split into several Planning Delivery Zones (PDZ)[xv], each with specific design codes following the LCS "Design and Access Statement", which lays out sitewide design and access principles and illustrates possible formal configurations and characteristics for the planned neighborhoods[xvi].
Overall, the importance of mixed-use and public space – both in green areas as well as street-level non-residential uses – is emphasized throughout the LCS and Local Plan[xvii] [xviii]. Moreover, they underline that public spaces must promote integration between pre-existing and new communities, and welcome and juxtapose different uses and users.[xix] Among the new communities, the East Village (former Athletes' Village) was the first to be delivered and should become a new local center within the Olympic Park[xx].



Fig. 1

Many recent developments seem to confirm the character of the park as a destination and a regenerated site with residential, cultural, educational, leisure, sports, and business uses. The "International Quarter" comprises residential and commercial uses and benefits from having the Financial Conduct Authority and Transport for London as some of its first tenants; "Here East" on the former International Broadcasting Centre is a creative hub with new spaces for UCL/Bartlett School, BT Sports, and Loughborough University; the "East Bank" cultural quarter will host the BBC Orchestra and Choir, a campus for London College of Fashion of the University of the Arts London (UAL), and a theater for the Sadler's Wells dance company. A public design competition in 2015 chose the masterplan for Stratford Waterfront, part of the East Bank development, followed by a public consultation held by the LLDC to refine the masterplan. The latest masterplan was approved in 2019, with the first delivered building planned for 2021 and the complex by 2028.
The Legacy Communities Scheme (2011) set out some characteristics and design principles from typical inner London's residential neighborhoods as a starting point for new developments within the new neighborhoods[xxi]: low- to mid-rise buildings, terraced types with front doors directly to the street, a mix of uses, tenures, dwelling types and sizes, a clear distinction between fronts and backs (public and private areas), local squares, parks, and green spaces integrated into the urban structure, comfortable walking and cycling routes, access to public transportation, and balanced provision of private car parking. Neighborhoods should foresee a variety of houses and apartments, including

mews houses, townhouses, maisonettes, terraced apartments, and urban perimeter blocks (including the possibility to add taller elements)[xxii].
The LCS and LLDC specify overall building heights for each sub-area: for instance, developments in Chobham Manor should not exceed 20m height nor 30m in East Village[xxiii]. Locations for tall buildings are restricted to specific areas unless there is clear evidence they would improve urban legibility and the public realm, have a good quality ground floor relation to the street, or enhance the urban landscape and streetscape (vistas, active street frontage, preserve heritage assets and views from/to these)[xxiv] [xxv].



Fig. 2

Connectivity and mobility are secured through the new public transportation links established since the 1990s with the CTRL rerouting, Jubilee Line extension, and the DRL. Furthermore, the park provides many cycling routes and pleasant walkable areas with an attractive landscape. Integration to surrounding neighborhoods still needs further improvement, but the urban grid of proposed new developments within the park and their boundaries provide fair conditions for future cohesion.

3.2. Urban Design as Process in London's Queen Elizabeth Olympic Park

Original urban design visions for legacy and the process of implementing plans in the London Olympic Park presented a relatively high influence of the state. The LLDC Local Plan divides the park into sub-areas and indicates design and development priorities for each of them, including site allocations such as open spaces, active frontages, non-residential ground floor frontage, and key connections[xxvi]. Applications for planning permission must comply with the policies set out in the document, besides other higher-level strategies and policies, such as the London Plan.
Land ownership also plays a key role in the character of legacy developments. The London Development Agency (a central government-funded agency under Mayoral responsibility and management) compulsory purchased the land designated for use as the Olympic park – as such, the state is a key agent in the strategic decision-making regarding the legacy plans for the site[xxvii].
Public Consultation is another interesting issue in the implementation process of London 2012 related projects. In 2008, for instance, public consultations were held addressing the Olympic legacy, including plans for the Olympic Village[xxviii]. Developers Lend Lease also held several consultations regarding their plans for new schools, healthcare, and community facilities[xxix]. Moreover, both the 2015 and 2020 versions of LLDC Local Plan were subjected to public consultation, inspection, and hearing sessions: for the 2015 version, there were public consultations between December 2013 and February 2014 and later from August to October 2014; for the 2020 version, consultations took place between November 2017 and January 2018, and hearing sessions in September 2019 after appointed inspection[xxx].

4. Rio de Janeiro 2016 Olympic Park: contrast to functionalism

The Rio 2016 Olympic Park is located in the region of Barra da Tijuca, planned after a functionalist masterplan by Lucio Costa in 1969. The park lies in a peninsula at Jacarepaguá Lagoon (118ha), formerly a race track and home to some of the 2007 Pan-American Games venues, which could be refurbished for the Games. The site was large enough for accommodating new venues and infrastructure and close to the defined site for the Athletes' Village, an area privately owned by Carvalho Hosken.
Following London's strategy of creating a Games-mode and a Legacy-mode for the Park, a competition was launched in 2011 by the municipality of Rio and the Brazilian Institute of Architects (IAB). The winning masterplan by AECOM and Brazilian Architect Daniel Gusmão proposed a new mixed-use, compact neighborhood within the park for the legacy mode, with a finer urban grid with surrounding Barra da Tijuca areas.

A public-private partnership built the park: the consortium Rio Mais (composed of contractors Odebrecht + Carvalho Hosken + Andrade Gutierrez) was responsible for building all infrastructure for the Games-mode and maintaining the complex for 15 years after Rio 2016 Games, and, in turn, received 30 plots for future real estate development within the Olympic Park.
This legacy transformation, however, only partially abided the 2011 legacy masterplan. The approved alignment and allotment plans for the site in 2012 depict larger plots (scaled as urban blocks) and a more rigid urban tissue defined by the large-scale permanent venues[xxxi]. Although Rio Mais had to follow the winning masterplan for the Games-mode works, the legacy transformation is mainly bound by urbanistic legislation, which dictates urbanistic parameters. The latter, however, was altered in favor of contractors before the Games, allowing for taller buildings and an increased overall plot ratio in the Olympic Park area (totalizing 1,180,000 m² floor space, excluding sports venues, the Media Hotel, IBC, and Media Press Center). Hence, further development in the neighborhood may clash with the original principles envisioned by the winning team.
Due to problematic governance and continuity of plans after 2016, the complex is a void, underutilized public space. While the park experienced an interesting period of fruition through the reopening of its venues and public spaces under the AGLO and Rio's municipal administration, its full potential has not yet been reached – the legacy masterplan is far from being implemented, especially amidst a critical economic scenario. This situation denotes a lack of urban-design embedded thinking both in the physical attributes of the park as well as in the process of planning and implementing legacy. The next sessions will address the design of the Park as well as governance issues.

4.1. Urban Design as Practice in Rio de Janeiro's Olympic Park
On a visit in May 2017, shortly after the park reopened as a public space, one could notice new landscape beds and trees (although insufficient to provide shade in a rather arid site), two sports courts in the middle of the central promenade called "Olympic Way", a skatepark, playgrounds, and outdoor gym facilities. Arenas were then closed, except during special events and sports competitions. All areas assigned for future development by Rio Mais remained inaccessible and with no signs of new developments. Before the "Rock in Rio" music festival in September 2017, due to safety concerns, the sports courts were removed from the main promenade and never rebuilt. Since the arenas were still closed to the public, the park was used for its open-air large spaces, and welcomed mostly local people, especially because there were no toilets or drinking water facilities.
After the "Olympic Legacy Governance Authority" (AGLO, in the Portuguese acronym, an autonomous entity tied to the then Ministry of Sport created in March 2017), replaced the Olympic Public Authority (created in 2011) to maintain the site, arenas began to be used for sports social projects and high-performance sports training. From August 2018, a partnership between the City of Rio and the SESC (Portuguese acronym for Social Service of Commerce) began to offer sports and leisure activities in Arena 3, which had been mostly closed until then. The use of the park for large-scale events such as "Rock in Rio" or "Games XP" (which provided funds for management) conflicted with the very nature of the park as a public and more community-oriented place. After four months unable to use the arena for its social and sports programming, the SESC terminated its contract with the city in 2019[xxxii].



Fig. 3

The 2011 masterplan envisioned a high-density quarter, based on polycentric urbanism, which aimed to resume a sense of scale as experienced in traditional neighborhoods of the city such as Copacabana. However, the approved alignment and allotment plan depict much larger plots and no scale variation of green and public spaces. In compliance with urban legislation, new developments may oppose a compact, mixed-use environment and become homogeneous in height (even as isolated high-rise towers). Since urban legislation in Brazil does not encompass urban design attributes, such as urban form and typological possibilities[xxxiii], the formal result of the neighborhood is yet an assumption, but one made entirely upon the tastes of a select group of contractors.

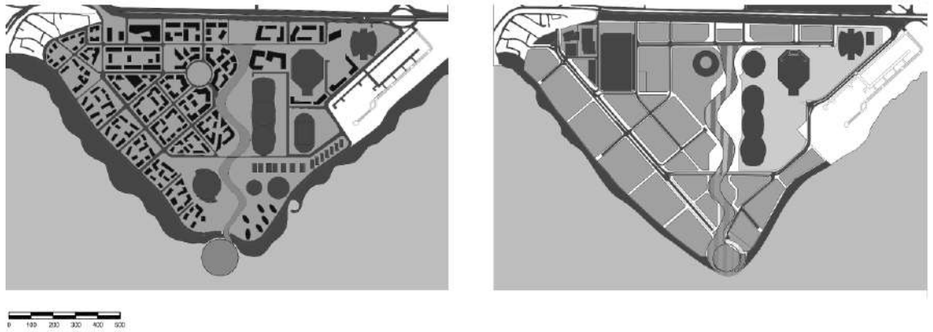


Fig. 4

The implementation of a new neighborhood within the park faces the challenges of an economic crisis and a poorly designed plan: large plots can become secluded and fenced developments, following the general model adopted in Barra, thus preventing the area from acquiring a sense of human scale and interesting urbanity for everyday uses on the street level. Furthermore, existing transport connectivity will need to be enhanced throughout the site: currently, the Bus Rapid Transit link has a stop in front of the park, albeit separated by a one-kilometer long, unshaded distance from the edge of the peninsula, where a viewing point stands in the former live site. The subway connection to Barra da Tijuca, long-discussed before the Olympics and finally enabled by the Games preparation, has only one station and over 12 km away from the park (and although connected via a BRT link, a one-hour travel time is discouraging).

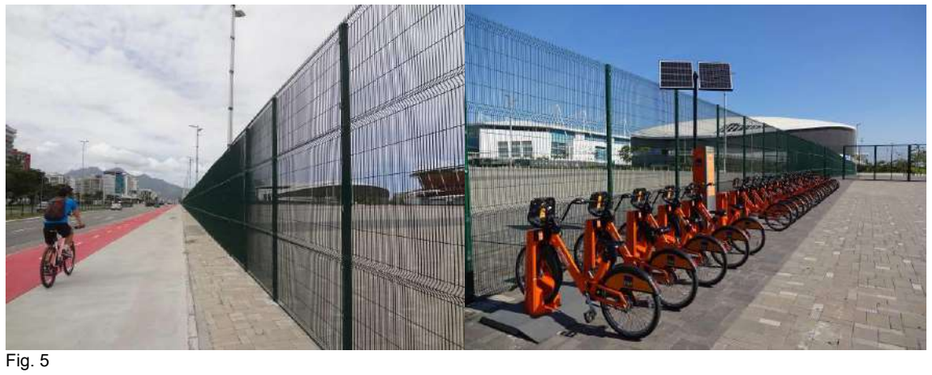


Fig. 5

4.2. Urban Design as Process in Rio de Janeiro's Olympic Park
While the legacy transformation does not become a reality, the park relies upon a poorly organized, discontinuous managerial process to keep its arenas in use and the open public spaces welcoming for daily activities related to exercising and leisure time. If the public-private partnership financial model enabled the construction of the park, it also posed a problematic legacy transformation, further hindered by the urban design character of Barra: given the monopolized private land ownership (one exception is a smaller plot in the front of the park, owned by the City), and the rather disconnected character of the peninsula to the existing surrounding areas, future developments will be constrained to a top-down vision by a selected group of contractors, instead of a more organic process of creating a city. On the one hand, the site needs time to mature, which could benefit from a more phased development scheme. On the other hand, other developments delivered by the consortium corroborate an exclusive, segregated ideal of urban design, which is likely to prevail if costs are lower and returns can be higher. Since there is no government plan underlining a clear urban design vision for the Olympic Park's future neighborhood to which developers must comply, urban form is restrained to a small number of decontextualized building parameters such as setbacks, plot ratios, permeability indexes, and building heights. In 2018, Rio Mais announced a legacy vision for the site, claiming sustainable urbanism based on cycle paths, squares, parks, and integration to public transportation. Despite an apparent variety of heights and greenery, the complex has a majority of tall buildings separated by large-scale open spaces, which conflict with the idea of a more human-scaled neighborhood, as originally envisioned.

Furthermore, we should mention that the Rio Mais ongoing plans are not transparent: in addition to lack of information in the company's official press releases, the legacy transformation does not encompass any public consultation. The latter has not been part of the general implementation of the Olympic Park. There is no evidence of a participatory process both in the original masterplan determination and subsequent revisions nor in the legacy transformation. As participation does not always translate into effective inclusion, we should remember that a series of public audiences were held with the residents of the prior Vila Autódromo community in the Olympic Park, with the outcome that only 20 families were allowed to remain in the site after a long and violent struggle between the state, contractors, and a neglected population[xxxiv].
With the controversial extinction of the AGLO in June 2019, the park faced an uncertain future. Six months later, the Brazilian president created the EGLO (Portuguese Acronym for "Olympic Legacy Governance Office") to replace the AGLO, yet also with a short lifespan and envisaged to end in January 2021, with a minimal staff of five people[xxxv].

5. Discussion: Olympic Parks as valuable public spaces

During the Covid-19 pandemic, public space re-emerged as a significant space in the city: as soon as cities reached reliable plateaus, open areas and street retail shops and restaurants soon became crowded again. An apparent revival of the importance of local-scale green areas and squares, as well as commercial activities on the street level within walkable distance, has emphasized the advantages of more compact, mixed-use neighborhoods. The Rio de Janeiro Olympic Park, if converted into a mixed-use neighborhood, would present the ideal urban radius of 1km. The pandemic has also highlighted the benefits of bicycles as a means of transportation, in comparison to crowded, artificially ventilated public transportation. There seems to be a certain reassertion as to the role of sustainable urban design in encouraging compact, mixed-use environments and local scale services, despite the paradox of needed social distancing and a certain degree of doubt on density.
Therefore, large scale urban public spaces, such as Olympic Parks, may present both a challenging and promising reality: on one hand, they provide enough space for social distancing while enabling citizens to enjoy open-air areas for leisure in a time of crisis, especially local residents who will increasingly perceive its value in urban life[xxxvi]. On the other hand, as large-scale spaces, they face two main issues: either being too far from the city center with poor integration to surrounding neighborhoods and low initial levels of connection with the local community; or an excessively large dimension for keeping any control of users – in Brazil, most parks have been closed by authorities during the pandemic. Furthermore, due to rising land or real estate prices near Olympic Parks (as a result of urban improvements), their accessibility could become restricted to local, higher-income residents during the pandemic, which however could again change once normality settles back in. This relates to the issue of providing a more varied legacy in terms of incomes and access by different social groups, also reflected on the typologies and types of real estate developments. London Local Plan sets a target of 35% affordable housing, and there are already some delivered units of this kind. Issues such as perceived safety and accessibility on foot and bicycle to and around Olympic Parks also become crucial and reassure the role of urban design in legacy planning and management, especially relating to the design of their boundaries and integration to existing neighborhoods. While many parts of the London Olympic Park have been re-developed as mixed-use quarters, with interspersed, different-scale green spaces, the Rio de Janeiro Olympic Park continues as a more arid and fenced park. Remaining closed to the public due to the stagnation of future transformations, combined with poor implementation and maintenance of legacy plans across different governance authorities since 2019, plus the Covid-19 pandemic, the park reopened in August 2020. Although field visits during 2017-2019 signaled an initial modest appropriation by local residents, the park's closing even before the pandemic compromised the consolidation of a public bond and positive image – something that needs time to evolve and could benefit from future real estate developments.

6. Final Considerations

Taken together, the analyses contribute to a dual understanding of Urban Design as process and practice – (Tab. 1). Given the scale of these sites planned for megaevents, they constitute a challenge for legacy. As observed in both examples, *urban design* must be embedded in the conception and implementation thinking of these large-scale urban developments in cities, both as an act of designing spaces – through quantifiable but also qualitatively assessable features such as mixed-use, morphology, and typology, connectivity – as well as a process of implementing these projects – through public consultation and participatory processes and a better balance between public and private demands secured by solid and continuous managerial bodies. Rio lacked a steady plan for legacy – also reflected on constantly-changing responsible governmental authorities – which, together with a discouraging economic scenario and disconnection to existing centralities, has undermined the conversion of plots into mixed-use developments anytime soon. London, on the other hand, although criticized for not achieving affordable housing targets or for promoting gentrification in East London, has managed to create vibrant urbanities within the park, while also referring to the traditional urban form and typological elements of the existing city. Moreover, the location of the East Village within the boundaries of the park helped to promote the conversion of adjacent areas and further integrate surrounding residential and commercial sites. The park itself has also become a valuable green area for the city, with high-quality designed open, public spaces. Even if Rio still has a long way ahead before we can speak of a definitive legacy, the initial years present a fragmented version of legacy regarding urban design, both as to what the physical characteristics of spaces can do for society in terms of further social integration and interaction, as well as to how these spaces can turn into interesting places through continuous, participatory processes of management and maintenance of the site. Future plans for the area need to take urban design into account across these two dimensions, embedding it into a long-term vision for building cities.

	Urban Design Aspects					
	Practice				Process	
Case study	Mixed-use	Morphology	Typologies	Connections	Public-private relation	Implementation of legacy
Queen Elizabeth Olympic Park	Different neighborhoods with different characteristics; retail on the ground floor, mix of institutions, commercial and residential spaces; arenas; green and public spaces.	Fine-grained urban tissue; enhancement of canal fronts; legibility principles for the townscape guaranteed by Local Plan.	Variety of typologies across different neighborhoods, referring traditional London building types; predominance of low to mid-rise buildings, with tall buildings as an exception.	Subway, train and DRL stations, cycle paths, walkable routes; connection to Stratford City, and existing neighborhoods.	LDA (governmental body) owned the land; developers must present in their Design and Access Statement compliance to the urban design guidelines of the Local Plan.	LLDC has been established in 2012 and acts as Planning Authority for the whole site; 1st Local Plan – 2015; 2nd Local Plan – 2020. Overall continuity of plans.
Barra da Tijuca Olympic Park	Sports arenas for social programs and high-performance training (intermittent delivery); leisure areas. Original masterplan envisioned mixed-use neighborhood as a legacy.	Coarse-grained urban tissue; arenas as isolated objects; morphology derived from legal urbanistic parameters.	Original masterplan proposed variation in buildings' heights and perimeter-block occupation; future neighborhood may produce isolated towers in enclaves.	BRT and bike rental station in front of the park; connection to a new subway line in Barra through BRT; bus stations on the main avenue.	The private sector owns the land for legacy development; the city manages public spaces (Olympic Way) and Arena 3; the federal government manages other arenas (AGLO / EGLO); municipal urban legislation does not establish the urban design nor does it detail the desired strategies for the Olympic Park.	Lack of continuity of managerial bodies and therefore plans for a concession of venues in legacy mode and transformation of the Park into a neighborhood. A critical economic scenario for new developments in a mostly private area.

Tab. 1.

Notes

1 Holger Preuss, A framework for identifying the legacies of a mega sport event, in Leisure Studies, 34:6, (2015): 643-664, DOI: 10.1080/02614367.2014.994552
2 This has been previously discussed in: Renata Latuf de Oliveira Sanchez and Stephen Essex. “The challenge of urban design in securing post-event legacies of Olympic Parks.” Journal of Urban Design 23 (2018): 278 - 297.
3 Alex Krieger. “Introduction: An Urban Frame of Mind”, in *Urban Design*, ed. Alex Krieger and William Sauders. (Minneapolis: University of Minnesota Press, 2009), vii.
4 Waltham Forest, Newham, Hackney Wick and Tower Hamlets
5 Andrew Church and Martin Frost. "The Thames Gateway: An Analysis of the Emergence of a Sub-Regional Regeneration Initiative." *The Geographical Journal* 161, no. 2 (1995): 199-209. Accessed September 8, 2020. DOI: 10.2307/3059976.
6 Gavin Poynter. “London: Preparing for 2012, in *Olympic Cities: 2012 and the Remaking of London*, ed. Gavin Poynter and Iain MacRury. (Surrey: Ashgate, 2009), 186
7 In 1989, the ARUP proposed to bring the high-speed Channel Tunnel Rail Link (CTRL) to Central London through Stratford and into St. Pancras instead of through a direct route to South London, to promote wider urban regeneration, including degraded areas in East London. (Interview with Jerome Frost, former Head of Design and Regeneration at the Olympic Delivery Authority – ODA, Planner at ARUP, 2016. Personal communication; ARUP, *How do you build a high speed rail network that connects communities as well as cities?* Retrieved from: https://www.arup.com/projects/high-speed-1)
8 This first consortium was formed by architecture and urban planning practices EDAW (later to become AECOM); HOK Sport; Foreign Office Architecture; and Allies & Morrison.
9 Interview with Jerome Frost (former Head of Design and Regeneration at the Olympic Delivery Authority – ODA), Planner at ARUP, 2016. Personal communication.
10 KCAP + Allies & Morrison + EDAW.
11 KCAP. Legacy Masterplan Framework London [UK]. Retrieved from: https://www.kcap.eu/en/projects/v/legacy_masterplan_framework/
12 Marshgate Wharf, Sweetwater, East Wick, Chobham Manor and Pudding Mill
13 “Pieces of city that develop and evolve over time resist being reduced to singular attributes.” Legacy Communities Scheme, 2011, 61.
14 London Legacy Development Corporation. *Local Plan 2015-2031*. (July 2015), 5.
15 Marshgate Wharf (PDZs 1 and 2); Sweetwater (PDZ4); East Wick (PDZ5); Chobham Manor (PDZ6); and Pudding Mill (PDZs 8 and 12).
16 Olympic Park Legacy Company. *Legacy Communities Scheme. Design and Access Statement*. September 2011.
17 Olympic Park Legacy Company. *Legacy Communities Scheme. Design and Access Statement*. September 2011, 87
18 The provision of family housing should be maximized according to the Local Plan, with proposals containing more two-bedroom-plus units than one-bedroom units. Moreover, proposals “should not avoid the provision of any single size or tenure”. Also, “Proposals which cluster units of a particular size and tenure and do not reflect these requirements will not be permitted.” (LLDC, *Local Plan 2015-2031*. 2015, 45 ; LLDC, Local Plan 2020-2036, 2020, 58)
19 Olympic Park Legacy Company. *Legacy Communities Scheme. Design and Access Statement*. September 2011, 87
20 London Legacy Development Corporation. *Local Plan 2015-2031*. (July 2015), 29; 183
21 Olympic Park Legacy Company. *Legacy Communities Scheme. Design and Access Statement*. September 2011, 59
22 Olympic Park Legacy Company. *Legacy Communities Scheme. Design and Access Statement*. September 2011, 109-117
23 LLDC, *Local Plan 2015-2031*. 2015, 186; LLDC, *Local Plan 2020-2036,* 209
24 LLDC, *Local Plan 2015-2031*. 2015, 89
25 LLDC, *Local Plan 2020-2036,* 98-99, 209
26 LLDC, *Local Plan 2020-2036,* 170
27 Gavin Poynter. “London: Preparing for 2012, in *Olympic Cities: 2012 and the Remaking of London*, ed. Gavin Poynter and Iain MacRury. (Surrey: Ashgate, 2009), 187, 189
28 Gavin Poynter. “London: Preparing for 2012, in *Olympic Cities: 2012 and the Remaking of London*, ed. Gavin Poynter and Iain MacRury. (Surrey: Ashgate, 2009), 188
29 Gavin Poynter. “London: Preparing for 2012, in *Olympic Cities: 2012 and the Remaking of London*, ed. Gavin Poynter and Iain MacRury. (Surrey: Ashgate, 2009), 188
30 LLDC, *Local Plan 2020-2036, 7-8*
31 Renata Latuf de Oliveira Sanchez, *Desenhando o Urbano: o Legado das Olimpíadas Rio 2016 na Barra da Tijuca,* (Doctorate Thesis, School of Architecture and Urbanism, University of São Paulo), 2019.
32 Demétrio Vecchioli. 29/10/2019 "'Solução' para o legado, Sesc se irrita com prefeitura e fecha unidade" Retrieved from : https://olharolimpico.blogosfera.uol.com.br/2019/10/29/solucao-para-o-legado-sesc-se-irrita-com-prefeitura-e-fecha-unidade/?cmpid=copiaecola
33 Although such model enables flexibility and creativity from developers and architects, it prevents the area from gaining further cohesion and legibility as an integral piece.
34 Comitê Popular Da Copa e das Olimpíadas do Rio de Janeiro. *Megaeventos e Violações dos Direitos Humanos no Rio de Janeiro*, Dossiê do Comitê Popular da Copa e Olimpíadas do Rio de Janeiro, Novembro de 2015. Retrieved from: https://br.boell.org/sites/default/files/dossiecomiterio2015_-_portugues.pdf
35 De última hora, órgão que gere legado olímpico é renovado pelo presidente Jair Bolsonaro. *Globo Esporte*. 01/07/2020. https://globoesporte.globo.com/olimpiadas/noticia/de-ultima-hora-orgao-que-gere-legado-olimpico-e-renovado-pelo-presidente-jair-bolsonaro.ghtml
36 According to a survey “Go Green for Parks” released in June 2020, more than 70% of the respondents said the QEOP was an important asset for London during lockdown: https://www.queenelizabetholympicpark.co.uk/media/press-releases/go-green-for-parks

Image Captions

Fig. 1. Left. East Village has become a Local Center with an interesting mix of residences, retail shops, and green spaces, as observed in 2016. Right. Non-residential uses on the ground floor of buildings help to create a vibrant urbanity.
Fig. 2. Left. East Village’s mid-rise buildings in a perimeter-block arrangement. Right. Chobham Manor low-rise typologies. Focal points created by architectural marks enhance urban legibility in both areas.
Fig. 3. Left. The Olympic Way had two sports courts in the park's initial legacy years, which began to be used for leisure purposes as observed on the 1st-anniversary celebration held at the park by the AGLO in August 2017. Right. The Carioca Arenas, with Arena 3 on the left, then managed in partnership with SESC, and the large-scale open spaces of the Olympic Way in front, then without the sports court, as seen in January 2019.
Fig. 4. Left. The original masterplan urban grid and intended morphology for Rio Olympic Park. Right. The approved alignment/allotment plan.
Fig. 5. Left. An extensive fenced façade compromises integration/connectivity to surrounding areas (May 2017). Cycle paths along the park contribute to green mobility, but lack of shade and variety of uses are discouraging. Right. The bike rental station in front of the park was an interesting asset in legacy mode, as observed on a visit in January 2019.
Tab. 1. Urban Design as Practice and Process in London 2012 and Rio 2016 Olympic Parks

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Space-body, environment-experience:
Hélio Oiticica, Gordon Matta-Clark–new ways of addressing the arts, architecture and the city in the 1970s

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Abstract

Hélio Oiticica and Gordon Matta-Clark are two world-renowned artists who worked in the last half of the 20th century, taking part in a moment of expansion of the artistic field linked to the neo-avant-gardes, as presented by Hal Foster. Despite having very different artistic practices, both address crucial issues to the art systems of the period, besides social, architectural, and urban issues. Hélio Oiticica, despite having started his career as a painter, after the 1960s turned to his so-called environmental production, besides actions more linked to performance and conceptual proposals. Matta-Clark, in turn, graduated as an architect in the late 1960s and always worked on the boundaries between the artistic and architectural disciplines. Another issue of interest is the proximity of the two artists in New York City in the 1970s when they got in touch and became interested in each other's production, as evidenced by notes in both artist's archives.

Thus, a rapprochement between the two artists sheds light on various transformations through which Western society underwent from the 1960s onwards, a period seen by many researchers as a transition from 'modernism' to the so-called 'contemporary'. When we bring the two artists side by side into a dialogue between their productions, many other fields of knowledge gain a new perspective, especially that of architecture and urbanism.

We propose, therefore, a transversal approach to the practice of both artists, with a special interest in related disciplines of the period, such as transformations in architectural practice, which lead to an idea of the diagram as basis of the design, and in urbanism, with a growing concern with the city users. Such an approach also reveals the genesis of several lines that inform the fields of contemporary arts, as well as contemporary architecture and urbanism.

Keywords: Hélio Oiticica, Gordon Matta-Clark, neo-avant-gards, contemporary art, architecture and urbanism

1. Introduction

The rapprochement of the production of two artists so formally different as Hélio Oiticica and Gordon Matta-Clark allows us to address several issues related to different areas of contemporary society, such as the visual arts, but also Architecture, Urbanism, and conceptions about the public and its subjectivities that inform these fields. The outline I propose here shows how these artist's productions relate to several changes in the architectural practice that took place in the second half of the 20th century indicating possibilities for creating other spatialities.

The starting point for this approximation is the fact that Matta-Clark and Oiticica met in New York City in the 1970s, as suggested by two notes in their respective files. Lisette Lagnado, when organizing Oiticica's files for the Hélio Oiticica Program,[1] found a task list[2] dated from 1978, at the end of the long period in which the artist lived in the city, whose first item is "send a card to Jane Crawford (about Gordon Matta's passing)".[3] Oiticica also appears once in Matta-Clark's archives, listed as a participant that the American artist would invite to an event he was organizing at the Whitney Museum.[4] The note is from 1970, when the Brazilian artist settled in New York and exhibited his *Ninhos* in MoMA's main lobby, during the *Information* exhibition, causing great impact between artists and the public, as reported by Vito Acconci.[5] Probably Matta-Clark wanted to get close to Oiticica when he moved to the city, but the event at the Whitney doesn't seem to have happened and there is no further record on the acquaintance between the two until 1978 when the American artist died of pancreatic cancer.

Their proximity in New York, however, draws attention. Greene Street, for example, served as a setting for important moments in both artist's trajectories. Matta-Clark exhibited several times at Holly Solomon's gallery, at number 98, and at the collaborative gallery he organized with Jeffrey Lew and Alan Saret at 112 Greene Street. Halfway between the two galleries, the artist placed his *Open House* in 1972, a large dumpster with internal partitions that formed a labyrinth for the public to explore (Fig. 1). The similarity of this work to Oiticica's *Penetráveis* is remarkable, and we can suppose that the Brazilian artist saw Matta-Clark's work. On the same street lived the experimental 'filmmaker' Jack Smith in his 'total environment' loft, where he held screening sessions for his 'movies' to which Oiticica attended. The impact of Smith's projections—slide projections with a sound narrative on the richly decorated walls of his apartment—on Oiticica was such that gave rise to the concept of 'quasi-cinema' and boosted his 'quasi-cinematographic' works like the *Cosmococas—program in progress* (1973), invented with Neville D'Almeida, and other experiments with the medium, such as the movie *Agrippina é Roma Manhattan* (1972), run in New York.[6]



fig. 1

We have already glimpsed the importance given by both artists to urban issues that in different ways are present in each other's artistic productions. Oiticica and Matta-Clark carried out several works at public spaces, either in more or less performatic *drives* such as those carried out by the first in Rio de Janeiro and New York or in Matta-Clark's performances such as *Open House* in which he offers pedestrians elements which re-signify their daily lives or enable their opening to new urban experiences.[7]

Examples of such actions are *Delirium Ambulatorium* (1978), in which Oiticica collected fragments of the Presidente Vargas avenue in Rio de Janeiro when it was undergoing expansion works, the 'urban-

poetic event' *CAJU—Kleemania* (1979), which he organized in order to give visibility to Rio de Janeiro's 'run-down' Caju neighborhood, and *Mitos Vadios* (1978), organized by Ivald Granato in a vacant lot in São Paulo. Oiticica carried out these actions after his return from New York, showing how his vision of the urban environment, which already existed before, was broadened after living for almost a decade in the North American metropolis. With these actions, the artist sought to "poetize the urban" thus enriching "THE STREETS AND THE FOOLISHNESSES OF OUR DAILY DAYDREAM".[8] It also expresses his 'ethical position' regarding urban spaces, since the artist saw the Caju neighborhood as an abandoned region of the city, but with several layers of meanings which should be recovered through such propositions.

> The CAJU is landfill: it is the imperial past (and it has D. JOÃO VI's house that looks more like a pigsty falling apart): it is the LACRAIA HOLE: it is a cemetery: it is a quay-port appearing to be of emergency and clandestine at the same time: it's military: it's a hospital for the tuberculous
> hence the choice and proposition
> open for whatever must come![9]



Fig. 2

2. Alternative spatialities in Oiticica and Matta-Clark

We should also mention the spatial question in both artist's productions. Through unique paths, they arrived at spatial propositions that reconfigure the usual apprehension we have of built spaces. Oiticica departed from the 'neoconcrete' painting towards a spatialization of the color that soon surpassed pictorial or chromatic issues, leading him to the creation of total environments that could eventually serve as exhibition spaces for contemporary works. Such is the case of his first environment, which groups several *Penetráveis* amidst a common ground of sand, gravel, water, and gardens with plants at the exhibition gallery. *Tropicália* (1967) and *Éden* (1969), its unfolding, proposed not only another way of apprehending the work of art but also a total involvement by the public, now made 'participant', in the discovery of the propositions launched by the artist and in the completion of such proposals.

Matta-Clark, on the other hand, trained as an architect but soon rejected the professional practice, which he saw as excessively rigid and reifying—crystallizing ways of life and spatial uses that prevent the full realization of life, much in accordance to the concerns of several architects of the period, as we will see later. Concerning the habit imposed in the use of spaces, something that Walter Benjamin had already stated regarding what he called the 'tactile reception' of architectonic objects,[10] Matta-Clark proposes what we can call an acquisition of non-normative habits. Here we can see also an aesthetic procedure guided by a very defined ethic, as in Oiticica, which becomes clear when the artist states that

> people inhabit spaces with frightening shyness. Many are homeowners, but do nothing but maintain them. […] People should at least be aware that they can undo themselves, the environment, and so on. Undoing, like doing, is a democratic right.[11]

His attempts to open the humane spatial experience beyond its constraint spaces are best exemplified by the cuts he made in buildings about to be demolished, his most known production. These cuts opened the constructions' bowels for pedestrians, subverting Cartesian spatial coordinates when experienced from within. The account made by those who visited his cuts and even by Matta-Clark also gives the dimension of this bodily mobilization and the subversion of spatial orientation.

Matta-Clark's first planned cut—the previous ones, gathered in *Bronx Floors* (1972-73), had been in abandoned Bronx buildings and weren't planned as an artistic work—was *Splitting* (1974), in a New Yorker suburban house condemned to demolition by real estate speculation. It is a simple cut halfway across the house's structure. To emphasize this 'separation', the artist toppled the foundations on one side by 5 degrees. This symbology of the separation between the two halves of a simple suburban home, until then inhabited by poor people who had been removed in a typical gentrification process, also shows the political issues behind Matta-Clark's artistic performance. The spatial configuration engendered by this cut in a typical American suburban house, however, informs his concern with alternative possibilities of experiencing built spaces. Alice Aycock claims that

> starting at the bottom of the stairs where the crack was small, you'd go up, and as you'd go further up you'd have to keep crossing the crack. It kept widening as you made your way up the stairs to the top, where the crack was one or two feet wide. You really had to jump it. You sensed the abyss in a kinesthetic [sic] and psychological way.[12]

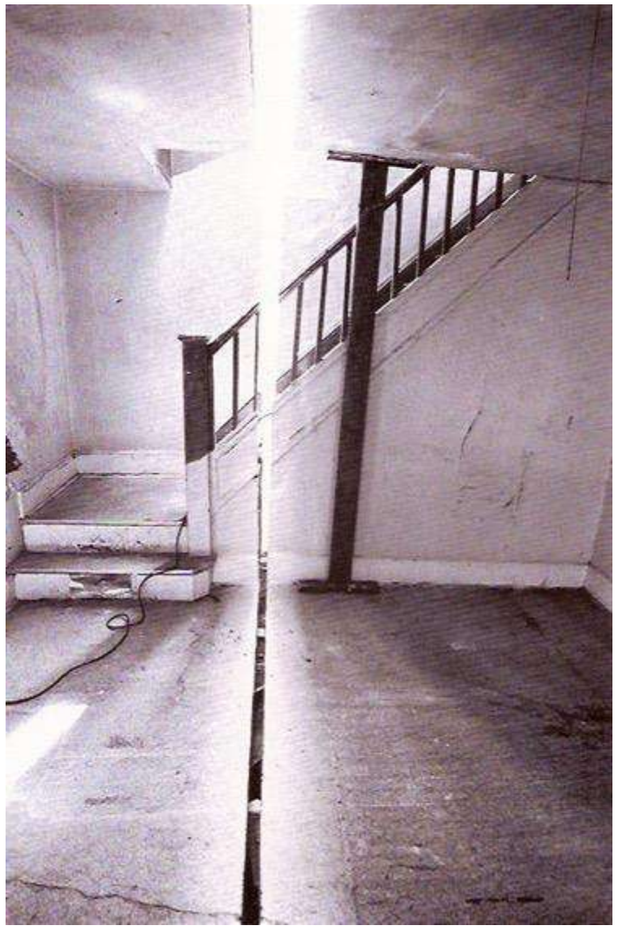


Fig. 3

What we envision here is an opening to structural sensitivity and to uses that differ from the ordinary ones, so that the public could appropriate and reproduce in daily life. We can also see the 'propositive' character of both artists: examples or testing of spatialities and situations that could be replicated in other places. And always according to their specific characteristics, not as universal proposals to be

abstractly repeated over the entire world as of the first modernisms. This is more noticeable regarding Matta-Clark, who never associated with any 'neo-avant-gardist' group with its dogmas, as was Oiticica's participation in the Neoconcrete group.

Hélio Oiticica also carried out an extensive investigation of the bodily relationship that we establish with the surrounding space and proposed several ways to interfere in such a relationship. It was with his *Parangolés* (1964) that he discovered the ideas of 'color-environment' and 'color-structure', and how the body could be directly involved in the artistic fruition. Based on his paintings' chromatic compositions and the neoplasticist theories of Piet Mondrian and Theo Van Doesburg,[13] Oiticica figured the spatial output of his work and its 'environmental' integration. The artist unfolds the chromatic relationships of his paintings in space and thus, when "the color is no longer subjected to the rectangle, nor any representation on this rectangle, it tends to 'embody' itself; it becomes temporal".[14] In this way, the spatial relationship presents itself to the audience-rendered-participant as essentially temporal, although not as painting's visual apprehension determined by the time of the gaze, but in a corporal time, which will unfold as the observer's body—in its sensory and perceptual totality—explores the space built by the artist. Regarding this transition to an environmental experience and its relationship with a neoplastic space in Mondrian's and Doesburg's manner, Oiticica states that:

> in this pursuit of an objective foundation, a new space, and a new time in the work on the environmental space, Parangolé's constructive sense aims at an 'environmental art' par excellence, which may or may not arrive at a characteristic architecture. [...] The spectator's participation is also characteristic here in relation to what exists today in art in general: it is an 'environmental participation' par excellence. It is about the search for 'environmental totalities' that would be created and explored in all its orders, from the infinitely small to the architectural, the urban space, etc.[15]

Oiticica's environmental art, therefore, involves introducing time in artistic apprehension precisely through the notion of color-structure, as stated above. According to Lisette Lagnado, based on Henri Bergson's reading, Oiticica "includes time in the work's genesis, just as Bergson inserts duration in the matter–and in this sense both converge when fusing this movement with Life, providing the vital élan", which would be "an insertion of time (duration) in the matter (painting)".[16]

The path of the 'public' in Matta-Clark's cuts also introduces time in the apprehension of the work, and the viewer participation is also fundamental to its completion, as we saw in Aycock's account. Likewise, Oiticica speaks of "a static architecture" that develops to become spatial, which "would therefore be the bridge to a spatial, active, or space-time architecture".[17] As Matta-Clark's issues resonate in Oiticica, the opposite is true. According to Jane Crawford,

> Matta-Clark [...] placed the audience inside the work of art, in such a way that it was no longer a matter of stopping in front of the work, but of moving to or with it. As the audience moved, their perspective changed, offering multiple points of view in time and space. In other words: public participation was required to activate the work, which meant changing the viewer's responsibility.[18]

3. Anarchitectures: demodulating space

When Matta-Clark states that "you are the measure"[19] he is aligning himself to a critique on the definition of a specific human body as the origin of all architecture, thus opening it up so anyone can establish their own measurements, evidently opposing Le Corbusier's *Modulor*. A curious precedent in the architectural practice pursued by Matta-Clark and other architects of his generation can be found in the artist's father, surrealist painter Roberto Matta, who made severe critics on the subject's reification promoted by the Swiss master's architecture.[20] For Matta, the *Modulor* would be the incarnation of an abstract subject aligned to the productivist society—and indeed it was, as stated by the Swiss architect.[21] After working with Le Corbusier, Matta started advocating for an architecture that would invoke "the sticky vicissitudes of the human body, a surrealist analog to the psychic contingencies of the unconscious", and that "his sensitive architecture" was "motivated by a decidedly non-rationalized subject, as mentioned by Pamela Lee. A malleable, ever-changing subject," whose "psychic turning was mirrored by an architectural transformation".[22]

Thus, instead of reifying an idealized type of hominid, Matta proposed that we should turn to a 'malleable subject' who could live up to the developments of modern society in its absolute contingency. A kind of subjectivation process always ready to be transformed into something different, as we are demanded in large cities where automobiles and the contact with the differences 'threaten' us at every step and in the new communication technologies where different personas must constantly be built and rebuilt to keep up with 'fashion' trends. Thus, it is a call for us to act critically in this ever-changing subjectivation process and not to embody a 'police subject' as the universal human model, as in the *Modulor*.[23]

Matta also sketched some 'projects' for the environment which would shelter such subjectivity, presented in an article in the surrealist magazine *Minotaure* in 1938. The article's title, *Mathématique sensible—Architecture du temps*, is explicitly ironic with Le Corbusier and presents a series of illustrations of this 'architecture of time'. Matta states that "we need walls like damp sheets which lose their shapes and wed our psychological fears... To find for each person those umbilical cords that put us in communication with other suns, objects of total freedom that would be like psychoanalytic mirrors",[24] anticipating several themes that would later be reworked in different ways by his son and by Oiticica—in search of the inner sun we launch ourselves into Oiticica's environments, as the artist would say. Also, the 'avant-gardist' architectural production of the time worked on very similar themes in what we can call a 'turn' within modernist aesthetics, as we will see next.

4. 'neo-avant-gardes'

An important characteristic of the late 1950s and the 1960s is the recovery of several themes that were elaborated at the beginning of the century in several disciplines. According to Hal Foster, such recoveries, whether that of Marx by Althusser, or that of Freud by Lacan, focused "on 'the constructive omission' crucial to each discourse" in order to "restore the radical integrity of the discourse" and "to challenge its status in the present". For the author, it was a way of clarifying "their [originally] contingent strategy, which is to *re*connect with a lost practice in order to *dis*connect from a present way of working felt to be outmoded, misguided or otherwise oppressive".[25]

According to Foster, in visual arts—always in the United States and Western Europe—, "many artists [...] studied prewar avant-gardes with a new theoretical rigor; and some began to practice as critics in ways distinct from belletristic or modernist-oracular precedents", citing as examples the textual production of Robert Morris, Robert Smithson, Mel Bochner, and Dan Graham.[26] The criticism carried out by artists was indeed of fundamental importance in this 'neo-avant-gardist' recuperation, and Oiticica mainly, but also Matta-Clark in a less systematic way, pursued it in parallel to their artistic production—as a manner of reflecting on their production and on guaranteeing their reception by the public.

Hal Foster also states that in the late 1950s and early 1960s, "dada and constructivism offered two historical alternatives to the modernist model dominant at the time, the medium-specific formalism" of the New York School and its unfolding.[27] I will not dwell on this discussion, for our interest is that after World War II the modernist avant-garde models were already exhausted and in United States' artistic field, abstract expressionism appeared as modernism that reinforces artistic autonomy instead of reintegrating it into 'vital praxis', an early 20th-century avant-gardes motif.

We can see something similar in architecture amid Europe's reconstruction effort after WW II. But once again it was in the United States where an eminently ideological work took place to integrate the aesthetic and spatial radicalism of Le Corbusier's, Bauhaus' and especially Mies van der Rohe's initial architectural modernisms in corporate buildings aesthetics that have New York's Park Avenue as the highest example of what was conventionally called 'International Style' and later 'high modernism'.[28] Robert Smithson, Matta-Clark's friend and mentor states that "the much denigrated [sic] architecture of Park Avenue known as 'cold glass boxes', along with the Manneristic modernity of Philip Johnson, have helped to foster the entropic mood"[29] which would integrate modernist proposals into the capitalist consumerist circuit.

Critics towards high modernism's formalism in both architecture and fine arts put forward such recovery of the avant-gardist radicalism from the beginning of the 20th century, as showed by Foster. In this sense Oiticica directly took part in one of these recoveries: that of Theo van Doesburg's Concretism which Max Bill recuperated and diffused in Brazil. Here it underwent a 'neo-avant-gardist' opening generating Neoconcretism, when Concretism's rationalist postulates were 'embodied' in favor of each person's subjective experiences. After the Neoconcretist phase the exhibition *Nova Objetividade Brasileira*, held at Rio de Janeiro's Modern Art Museum (MAM-RJ) in 1967, in which Oiticica presented his *Tropicália* for the first time, is emblematic of such opening to more individual and less dogmatic practices that addressed political and/or social issues. No longer there was a structured group around rigorous postulates like the Concrete avant-gardes of the previous decade, but a "state, [...] an 'arrival', made up of multiple trends, where the 'lack of unity of thought' is an important characteristic" and whose unity would be found in a 'new objectivity'. One of the fundamental characteristics of this state would be a "general constructive will" without following strict postulates that regulate the practice of several artists.[30]

Afterward, the Brazilian avant-gardist production spread itself to such non-dogmatic practices, also resulting from the opening of the painting medium onto space, time, and the body perpetrated by the Neoconcretist artists. Mário Pedrosa at the time characterized Oiticica's production as 'postmodern', in a distinct sense from the current use of the term, but close to the debate that interests here. For him, "in this phase of art in the situation, of art antiart, of 'postmodern art', […] values which are properly plastic tend to be absorbed in the plasticity of perceptual and situationist structures",[31] something which we can

also see in Matta-Clark's production and in the architectural practices that we are going to address further on.

Gordon Matta-Clark, in turn, directly enters this 'post-neo-avant-garde' phase, when individual attitudes no longer need to be confirmed by dogmatic groups and sets out to undertake a critique of architecture from within. The structural opening that the artist makes in the buildings he cuts and his intrusion into the urban space to expose the contradictions of capitalist production of the city and the bodily constriction that results from this are part of this attitude. Matta-Clark studied architecture at the Cornell Faculty of Architecture, which at the time was marked by Le Corbusier's influence revisited mainly by critic Colin Rowe, for whom the Swiss architect had been "the sole modern practitioner to establish a methodology for the systematic de-construction and elaboration of a Neo-Humanist architecture".[32]

Another 'post-Corbusian' approach of the period and which had a great influence on Cornell's teaching was Peter Eisenman's 'critical formalism', one of the main representatives of the so-called 'New York five' along with John Hejduk, Charles Gwathmey, Richard Meier and Michael Graves. Contextualism envisioned "architecture's relationship with the city through the notion of type and context, or the analogous gestalt model of the figure-ground relation, acknowledging the 'place-making' capacity of architecture and its embeddedness at a given site".[33] For Matta-Clark, his training at Cornell was his "first trap", since what he studied there "always involved such surface formalism that I had never a sense of the ambiguity of a structure, the ambiguity of a place, and that's the quality I'm interested in generating in what I do".[34]

Even though this contextualist practice also ended up reinforcing architectural autonomy, it originally sought to open modernist dogmas for a specific local action, diluting its closed and universally applicable styles. Thus, Matta-Clark's criticism is part of the same paradigmatic shift put on by several architects of the period. Indeed, there are many variations within the discipline and while New York's 'high modernists' and Oscar Niemeyer and Lucio Costa in Brazil, for example, reinforce a 'surface formalism', others would pursuit within the modernist practice it's opening up to less rigid modalities of space appropriation by its users. The concept of a transformable architecture, in accordance with the contingent times, emerges with full force in experiments by architects from the period, especially in Western Europe. Matta-Clark directly attacks corporate modernism and what he calls the "abuse of the Bauhaus and early Purist ideals".[35]

Although Oiticica doesn't address architectural discipline per se, he also criticizes the use of urban spaces and the 'frivolity' of what he calls 'garden aesthetics'. And within his understanding of the *Parangolé* as an 'anti-art' program, he criticizes the museum space:

> Museum is the world; it is the everyday experience: the industrial exhibitions' large pavilions are the ones that still serve for such manifestations: for works that need shelter, because those that do not need it should be in parks, vacant lots in the city (how are they much more beautiful than parkishes like Glória landfill in Rio).[36]

In the specific spatiality in which their works are to be settled and in those proposed by their environments such as *Tropicália* and *Éden*, there is also a criticism towards the architectural practice of the period and a proposal to be carried out, by the public's participation, a "reintegration of the space and everyday experiences in this other spatio-temporal and aesthetic order".[37] For Oiticica, his *Núcleos*, which paved the way to his environments, already express an architectural idea, as they are "the elaboration and the will to give a great purely intuitive order to the elements I have: color, structure, space, time. Its meaning is a kind of synthesis between the architectural and the musical".[38] The unfolding of Neoplasticist ideas is clear here, and we can also see a convergence between Oiticica and Matta-Clark as well as the architectural practices of their time.



Fig. 4

David Sperling also states that, for Oiticica, architecture took part in its environmental program as "a transformable spatial whole" that "should be a field structured by mobile and static elements, both transformable in their own way". Also, the 'participant' had a major role in this continuous spatial restructuring.[39] Here, too, Matta-Clark's speech echoes in regard to the passivity with which people inhabit space. We see, therefore, a pursuit of architecture as a "transformable, experiential site, as a space of human existence; the structured and open space as the only possible field for manifestation of a political dimension".[40] Another emblematic work of a transformable architecture by Oiticica is the *PN1* (1960), his first *Penetrável*. Despite being related to the spatialization of the color in the development of the artist's oeuvre, *PN1* is the most illustrative of what could be a user-transformable architecture, as it is formed by movable wooden boards which the participant must move to explore and leave that mini-maze. Something on a slightly larger scale occurs at Matta-Clark's *Open House*, in a more architectural sense, since the partitions are not properly mobile, but doors that open to the different corridors built inside the dumpster.

5. Architectures for contingency

Several architects also pursued the creation of transformable living spaces. As Flávia Oliveira states, "defamiliarizing, deprogramming, reprogramming and cross programming would be verbs frequently used" by architects of that generation, "concerned with the limitations that architectonic practice established".[41] A project that we should mention is the *Fun Palace* (1962-1967) by Cedric Price, who is part of the so-called British 'Meccano generation', whose main representatives were gathered in the *Archigram* group.[42] The *Fun Palace* was a pragmatic attempt to build an unprogrammed space that could accommodate the most different leisure activities and should be in perpetual transformation according to the public's demands—in 'oiticiquian' terms, a space in which the *Creleisure* [*Crelazer*] could be carried out.[43]

According to Price's memorial, "the place is a constantly changing experiment in which the old human categories are forgotten". At the *Fun Palace* "each person can discover in himself new skills and increase his enjoyment of life. Each man and woman [...] [is] capable of what was once called genius".[44] The result of the project would be a large metallic structure housing a series of moving elements within it. Cranes would run the length of the building carrying prefabricated modules for the walls, floors, and ceilings according to the users' needs. For Price, the building would be "a large shipyard in which enclosures such as theatres, cinemas, restaurants, workshops, rally areas, can be assembled, moved, re-arranged and scrapped continuously".[45] Thus, "virtually every part of the structure was to be variable, with the overall structural frame being the fixed element".[46]

Therefore, by using technological developments, an erasure of the architect as the author would also take place, making the elements available to the public so it could carry out his creative activity.

The *Fun Palace* influenced an entire generation of architects, thus being the synthesis and embryo of several experiments. The *Georges Pompidou Centre* (1977) projected by architects Richard Rogers and Renzo Piano, backdrop and ideological context for Matta-Clark's *Conical Intersect* (1975), is one of the most representative buildings regarding Price's ideas.[47]



Fig. 5

If 'form follows function', the tenet of international-style architectural modernism, for Matta-Clark "form fallows function",[48] a wordplay that would express "that a rigid adherence to certain ideas of form will restrict an object or a building's usefulness". James Attlee also suggests that "an opposite approach" to the expression "might be to allow an object's appearance to suggest spontaneous new uses, in the way that the carriage of a wrecked train suddenly becomes a bridge", as it appears in a photograph of the Anarchitecture group exhibition.[49]

Flávia Oliveira also recalls architect Yona Friedman's practice, which also pursued the mutability of the architectonic space. For him, "the function of each architectural space is determined, primarily by the specific equipment for this space: furniture and fixed installations",[50] paving way for an architecture that takes into account the possibility of being transformed according to the different needs of its users. In 1956, Friedman made a series of sketches specifying which elements would be necessary for the construction of a 'mobile architecture' that could shape a city of up to 50 thousand inhabitants. The drawings show the details of the construction system which would be used for the production of these flexible dwellings where even the internal elements of the house would be mobile and could be easily produced by anyone.[51]

This flight over the production of two European architects from the late 20th century was an attempt to illustrate some practices that ran in parallel to Matta-Clark's and Oiticica's productions. We could take many other examples to refer to this search for alternative spatialities less directed by the productivist imperatives of Western society both within the modernist canons, as of Vilanova Artigas in São Paulo, and outside them and more recently, as of the Dutch Rem Koolhaas at the opposite end of a very 'spectacular' architecture but deprogrammed as much as a constructed building can be.

Visual arts can also offer us radical examples in creating alternative spatialities and broadening the fruition of urban spaces. One artist that we should mention is Lara Almárcegui, who has a direct tributary role to Matta-Clark and also addresses 'communitarian' issues developed by the two artists in issue here. In *Restaurando el mercado de Gros unos días antes de su demolición* [*Restoring Gros market a few days before its demolition*] (1995) and *Hotel de Fuentes de Ebro* (1997) the artist intervenes, together with the local community, in buildings about to be demolished. Besides restoring them in a 'Sisyphean' attitude, since they will disappear from the landscape soon after, she holds large parties and meals in these spaces, temporarily opening them to the neighboring community.[52]

Another example of a contemporary Brazilian artistic practice that synthesizes Oiticica's and Matta-Clark's practices regarding the use of urban space is that of Louise Ganz. In *Lotes vagos* (2005-2008), carried out in the cities of Belo Horizonte, Rio de Janeiro, and Fortaleza in partnership with Breno Silva, the artists temporarily appropriate vacant lots and insert several elements for the population's leisure, such as hammocks and beach chairs, besides canvas and fabrics that create different environments for the public's enjoyment, mainly neighbors of the lot.[53] We can say that there is a productive encounter between Oiticica's environments and Matta-Clark's idea of community gardens, giving the population the possibility to use those spaces for a certain period—as long their owners allow it—and encouraging them to replicate the experiment elsewhere.

Thus, we could see how Matta-Clark's and Oiticica's actions are close to present issues in the architectural practice of their time and how they left several seeds for the future, establishing a variety of practices and prototypes for actions that characterize contemporary art and architecture. Constantly theorizing about their productions and opening modernism to other sensitivities, we can say that Oiticica's and Matta-Clark's productions, either contribute to the expansion of the 'mythical' meaning of specific communities that were set apart from the consumer society or to the invention of new radical ways of inhabiting the world, thus leaving their proposals open for future generations.

Notes

1 Hélio Oiticica's entire written archive is available for consultation at: http://www.itaucultural.org.br/programaho/; all references to this archive in the present text will bear the acronym PHO.
2 Oiticica, Hélio. *Fazer [atribuído]*. Programa Hélio Oiticica [PHO], archive number: 0077/78. p. 01
3 Hélio Oiticica lived in New York between 1970, when he was awarded a grant from the Guggenheim Foundation, and 1978, long after the end of the scholarship in a kind of self-exile from Brazil.
4 Matta-Clark, Gordon. *Green composition notebook with Garbage Wall instructions*.
5 see: "Héliophonia" [movie].
6 about this issue, see: Buchmann, Sabeth, and Cruz, Max Jorge Hinderer. *Hélio Oiticica & Neville D'Almeida: cosmococa*, 37
7 In *Fresh Air Cart* (1972), for example, Matta-Clark takes a cart with two seats and an oxygen cylinder to Wall Street and offers, in the symbolic heart of financial capitalism, a breath of fresh air for busy passersby in their daily routines. Oiticica, on the other hand, on different occasions went out with friends in New York and Rio de Janeiro wearing his *Parangolés* and proposed or took part in actions directly in public spaces of Brazilian cities.
8 Oiticica, Hélio. *Delirium ambulatorium*. PHO, archive number 0066/78, 03
9 Oiticica, Hélio. *Para acrescentar ao texto de NANCI*. PHO, archive number 0055/79. 01-02; we have tried to maintain the text format as closely as possible as the one proposed by the author.
10 see: Benjamin, Walter. *A obra de arte na era de sua reprodutibilidade técnica*, 193
11 Matta-Clark, Gordon. *Gordon Matta-Clark em entrevista a Donald Wall*, 165
12 Aycock, Alice *apud* Kravagna, Christian. *It's nothing worth documenting if it's not difficult to get: on the documentary nature of photography and film in the work of Gordon Matta-Clark*. Em: Diserens, Corinne [org.], 139-140
13 Mondrian also speaks of a total spatiality and an urbanism which derives from his painting's spatial relationships, as well as Van Doesburg, who further explored the relationship between his paintings and architecture designs. In this regard Mondrian states that "we should no longer consider the residence as a 'box'. The idea of 'home' (home, sweet home) must be abandoned. Just like the conventional idea of 'street': we must consider the house and the street as the city which is a unit, formed by plans that are composed of a neutralizing opposition, by which all segregation and exclusion are eliminated". Mondrian, Piet. "A casa – a rua – a cidade", 171
14 Oiticica, Hélio. *Aspiro ao grande labirinto*, 23. All further references to this book will bear the acronym AGL.
15 Oiticica, Hélio. *AGL*, 67
16 Lagnado, Zizette Dwek. "Hélio Oiticica: o mapa do programa ambiental", 23
17 Oiticica, Hélio. *AGL*, 29
18 Crawford, Jane. *Gordon Matta-Clark uma comunidade utópica: o SoHo na década de 1970*. In: Rangel, Gabriela; Cuevas, Tatiana [orgs.], 54
19 Matta-Clark, Gordon *apud* Oliveira, Flavia Santos de. "Lembretes desmoralizantes. Matta-Clark entre atos e traços", 142
20 Matta graduated in Architecture in Chile and worked with Le Corbusier for a while until he came into contact with Surrealist artists—and with Duchamp as well—and began to reject Corbusian postulates and criticize the architect for what he saw as a lack of concern with the people who live in his buildings.
21 The *Modulor* is a system of spatial proportions developed by Le Corbusier in the 1940s to reconcile the metric with the imperial measurement systems and to rationalize its architectural production in view of the 'humanization' of the built environment. Le Corbusier based the *Modulor* on a 1.83m tall man and from it develops his entire system of proportions for the configuration of architectural spaces. The criticism of this model is that it is based on a somewhat abstract type of 'subject', since the discussion about its size is reported by Corbusier in quite arbitrary terms and was chosen because it was the one that best allowed him to explore the range of proportions required in developing his projects. About *Modulor* see: Le Corbusier. *El Modulor*. On criticisms of Le Corbusier's measurement system, see: Artigas, Vilanova. "Le Corbusier e o imperialsimo", 17-24 and Sadler, Simon. *The situationist city*, 50
22 Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 7
23 It is important to highlight that the *Modulor*'s measure of 1,83m not only facilitated the calculation of the proportions for Le Corbusier but also comes from a speech by one of his assistants who suggested such a measure because "in the English police novels [...] the 'good ones'—a policeman, for example—are always six feet tall", or 1.83m, further demonstrating the privilege given by the architect to the imperial measurement system, since the number is round within this pattern and it's not in the metric. Le Corbusier. *El Modulor*, 52-53.
Due to this origin, the members of the *Internationale lettriste*, a group that would give rise to the *Internationale situationniste* and had an important participation in the debates about the idea of subject, the city and the space of the 'spectacular consumer society', called the Swiss architect 'le Protestant modulaire' and 'Le Corbuiser-Sing-Sing' regarding a famous American prison. See: Sadler, Simon. *The situationist city*, 50
24 Matta, Roberto *apud* Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 7
25 Foster, Hal. *The return of the real*, 2-3 [author's emphasis]
26 Foster, Hal. *The return of the real*, 5
27 Foster, Hal. *The return of the real*, 4
28 The first moment of this extraction process of social themes present in European modernist production took place in 1932 when MoMA, under the direction of Alfred Barr, held its first exclusively architectural exhibition *Modern Architecture: International Exhibition*, curated by Henry Russell Hitchcock and Philip Johnson, that took to the museum the production of this then emerging 'international style'. The presence of refugee war architects in the United States like Mies van der Rohe further spread the modernist style, converting it into a formalism apart from any deeper social discussion. For more information, see: Hitchcock, Henry Russell and Johnson, Philip. *The International Style*.
29 Smithson, Robert. Entropy and the new monuments. In *Robert Smithson: collected writings*, 12
30 Oiticica, Hélio. *Esquema geral da Nova Objetividade*. AGL, 84
31 Pedrosa, Mário. "Arte ambiental, arte pós-moderna, Hélio Oiticica". In *AGL*, 9
32 Rowe, Colin *apud* Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 35
33 Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 35
34 Bear, Liza. "Gordon Matta-Clark: Splitting the Humphrey street building". In Diserens, Corinne [org.], 167
35 Matta-Clark, Gordon. "Gordon Matta-Clark's building dissections, an interview by Donald Wall". In Diserens, Corinne [org.], 184
36 Oiticica, Hélio. *AGL*, 79-80
37 Oiticica, Hélio. *AGL*, 36
38 Oiticica, Hélio. *Núcleos* [atribuído]. PHO, archive number 0182/62 – 14/20. 04
39 Sperling, David Moreno. "Body + Art = Architecture: propositions by Hélio Oiticica and Lygia Clark", 140
40 Sperling, David Moreno. "Body + Art = Architecture: propositions by Hélio Oiticica and Lygia Clark", 144
41 Oliveira, Flavia Santos de. "Lembretes desmoralizantes. Matta-Clark entre atos e traços", 155

42 The *Archigram* group was created in England in the 1960s by architects Warren Chalk, Peter Cook, Dennis Crompton, David Greene, Ron Herron and Michael Webb. The group's best-known production are its proposals for utopian high-tech cities such as *Walking City* (1963), *Plug-in City* (1964) and *Instant City* (1968), all presenting highly technological elements and anticipating characteristics of Western society that would only appear in the following decades. Those are proposals for mobile and/or ephemeral cities that combine the aesthetics of consumption generated by the *Independent Group*, and then developed by pop artists in the United States, with the situationist proposals. For them, the "situation—the happenings within spaces in the city [...]—is as important, possibly more important, than the built demarcation of space [...] This time/movement/situation thing is important in determining our whole future attitude to the visualization and realisation of the city". Archigram *apud* Sandler, Simon. *The situationist city*, 133. For more information about the group, see: The Archigram Archival Project
43 Oiticica never precisely defined what he meant by *Crelazer*, or *Creleisure*, and states that "not to occupy a specific place, in space or time, as well as living the pleasure or not knowing the hour of laziness, is and can be the activity to which a 'creator' can indulge itself. [...] Is Creleisure creating in leisure or believing in leisure?—I don't know, maybe both, maybe none". Oiticica, Hélio. *AGL*, 113
44 Price, Cedric *apud* Mathews, Stanley. "The Fun Palace: Cedric Price's experiment in architecture and technology", 79
45 Price, Cedric *apud* Mathews, Stanley. "The Fun Palace: Cedric Price's experiment in architecture and technology", 80
46 Mathews, Stanley. "The Fun Palace: Cedric Price's experiment in architecture and technology", 81
47 The *Centre National d'Art et de Culture Georges Pompidou* was built by the French government in a very conflicted area of the city, the region of the old Les Halles market that was completely razed to make way for new transport and trade infrastructures. When Matta-Clark made his conical intersection in two houses from the 17th century that were to be demolished in the region, the construction of the centre was already at a very advanced stage. For further information see: Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 171. On the transformation of the region and Paris in the 20th century see Sadler, Simon. *The situationist city*, 55-66
48 Matta-Clark, Gordon. "Carta de Gordon Matta-Clark ao grupo Anarchitecture (The Mob)". In Rangel, Gabriela; Cuevas, Tatiana [orgs.], 149.
49 Attlee, James. "Towards Anarchitecture: Gordon Matta-Clark and Le Corbusier".
Anarchitecture was a group formed by Matta-Clark in 1973, initially with artists Suzanne Harris and Tina Girouard to discuss the "idea of places outside of architecture, without architecture, or extra-architectural". Other members later joined the group, such as Laurie Anderson, Richard Nonas and Richard Landry. His girlfriend at the time, dancer Caroline Goodden and artist Lawrence Weiner also took part in some encounters of the group, showing the breadth of interests gathered there. The only exhibition held by the group was a gathering of photographs from situations that expressed this ambiguity of space and "the transitional, or transpositional, in architectural practice", such as broken trains, houses being transported in barges, urban details and even the then newly opened twin towers of the *World Trade Center*. Lee, Pamela M. *Object to be destroyed: the work of Gordon Matta-Clark*, 104
50 Friedman, Yona *apud* Oliveira, Flavia Santos de. "Lembretes desmoralizantes. Matta-Clark entre atos e traços", 64
51 For further information on Friedman's *Mobile Architecture*, see: http://www.yonafriedman.nl/?page_id=355
52 For further information on this and other works by Lara Almárcegui, see: http://habitat.aq.upm.es/boletin/n38/alalm.html
53 see: http://lotevago.blogspot.com.br

Image captions
Fig. 1 Gordon Matta-Clark, Open House (1972) internal view, at Greene Street, New York.
Fig. 2 Hélio Oiticica, *Delirium Ambulatorium* (1978) at Presidente Vargas Avenue, Rio de Janeiro.
Fig. 3 Gordon Matta-Clark, view of the cut staircase inside *Splitting* (1974), Englewood, New York.
Fig. 4 Hélio Oiticica, view of *Tropicália* (1967) and *Éden* (1969)
Fig. 5 Gordon Matta-Clark, view of *Conical Intersection* (1975) with the Georges Pompidou Centre at the background, in Paris.

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Future versus Past:
Paradoxes of Porto Maravilha Project

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Abstract

The aim of this paper is to establish ways of reflecting about the current situation of traditional neighborhoods of the harbor region of Rio de Janeiro (Saúde, Gamboa, Santo Cristo, and part of Downtown), which are legally protected (1985) and object of interventions of the Porto Maravilha conservation project (2009). This region has always had an economic and environmental impact and a great number of black people in slum tenements, being historically segregated in social and spatial issues, in opposition to the town center, which is a symbol of modernity and richness. The project has established connection (via VLT – Light Vehicle on Rails) from the harbor region to the town center, strong verticalization of the old harbor retro area occupation (30 to 50 floors), without proposing ways of conservation and maintenance of the traditional urban, social and local tissues, which are currently damaged and lose their original content.

The comparison between 'old town' and 'modern town' made possible the construction of the conceptual identity of traditional urban areas. The categories 'historic' and 'non-historic' enabled the demarcation of protected sites and those guided by urbanistic and building parameters that focus on conserving the inner qualities of architectures and low densities. This demarcation could save them from destruction; however, the city is perceived as a historical object and should have good quality as a whole, not only in the 'historical' sites, which should be integrated and not isolated by obsolescence or 'museumlization'. The opposition between 'renovation' and 'conservation' connected 'renovation' to 'modernity' and 'progress', while 'conservation' was connected to the freezing and obsolescence of parts of cities' urban tissues. It is necessary to integrate protected areas into the cities dynamic, updating original structures, without wasting traditional social tissues that are responsible for constructing the sense of place.

Keywords: Urban conservation, cultural heritage, urban planning, gentrification.

1. Introduction

We intend to establish means of reflecting on the current urbanistic and social situation of the traditional area of Rio de Janeiro, compounded by the neighborhoods of Saúde, Gamboa, Santo Cristo, and part of Downtown, located in the harbor region. These neighborhoods are legally protected since 1985 and they form the Cultural Environment Protection Area (*APAC* in Portuguese, or *Apac-Sagas*, as it is known), which has been included in the Area of Special Urbanistic Interest (*AEIU* in Portuguese) that was an object of the revitalization actions proposed in Porto Maravilha Project in 2009[1]. *Apac-Sagas* protected about 1,500 buildings, characteristic of the last century, with residential and commercial usage.

Since the consolidation of its occupation in the 18th century, the region has been characterized by holding economic usages that are necessary to the economic development of the city, even impacting on the environment, and also a great amount of African descendant population that lived in slums[2]. It started in the 20th century with the residential occupation of medium and lower socioeconomic classes, with small commerce and some industries, and with its social context associated with popular cultural manifestations, especially samba. Because of it, the region has been historically segregated in social and spatial terms, always identified with poverty, social exclusion, and obsolescence, in opposition to the other parts of Downtown, which have been seen as symbols of modernity and richness.

The imagery duality has been historically constructed in the center of the city since the beginning of the 20th century, through many interventions of a radical renovation of the urban tissue that highlighted some regions, such as the construction of *Avenida Central* (currently called Rio Branco Avenue), the administration of President Rodrigues Alves and Mayor Pereira Passos (1902-1906)[3]. From this period on, the city has started to have a "totally new face, according to economic and ideological statements of the moment", specified by the social layers that were hegemonic in the country and did not accept anymore the presence of poor people in the expensive areas of their capital[4]. The intervention was characterized as the first case of gentrification in the city, followed by the opening of Presidente Vargas Avenue (1942-1944), the destruction of Castelo – the origin of the city (1922-1940) and Santo Antônio (1955) hills; and the occupation of the respective esplanades, among other actions. These activities reaffirmed the conviction of Rio de Janeiro's mayors of making a 'modern' city in the central area, described by corporative occupation in skyscrapers and by the poor people who gradually looked for a home in communities nearby[5].

It is possible to observe that, in Downtown, there are still small areas remaining of 18th, 19th, and beginning of 20th century, located in drastic mentioned urban intervention areas that were, because of it, legally protected[6]. These regions were associated with obsolescence, being not able to have residences, which were prohibited in the 1970s, and having exclusively small commerce[7]. Obsolescence is a common characteristic of these areas and the harbor region, in the urbanistic context of the city's historic center. Nevertheless, these regions have significant differences in their social context, because of their different historical processes of formation. Because of it, analysis and reflections among the current urbanistic and social situation of traditional neighborhoods of Rio de Janeiro's harbor region, which result from unfair public policies that seem to happen again considering the proposals of Porto Maravilha project.

According to its original advertising, Porto Maravilha established economic, urbanistic, and building actions that aimed at the revitalization of a devastated and obsolete area, such as road connection (via Light Rail Vehicle – VLT in Portuguese) from the Area of Special Urbanistic Interest to Downtown, the brutal verticalization of the old harbor retro area (30 to 50 floors), among other actions. Nonetheless, it did not bring ways of enabling traditional local urban and social tissue conservation and maintenance, which are in process of the devastation of their original cultural content since the 1980s.

Having this frame in mind, the historical method is considered an important tool to comprehend urban facts that are related to the process of formation of the proposed area. The historical method is the fundamental way of perceiving the urban phenomenon under two basic aspects. It regards the understanding of the city as a material fact, an artifact, which construction happened throughout the time and through time remains, even discontinuously, including history's documentary function. On the other hand, it relates to the understanding that history is the study of the foundation itself of urban facts and their structure. This view complements the first one and approaches, besides the city's material structure, the idea of the city as the synthesis of many non-material collective values. Consequently, the 'city's soul' becomes history. The past is the comparison and parameter to the future[8].

Considering the detected 'historical facts' as characterization of the traditional Rio de Janeiro's harbor neighborhoods, historical occupation, and urban policies that have consolidated them are going to be initially analyzed in this paper. Then, the social relation and the image of this area and the rest of the city are going to be evaluated. Finally, the opposition between the legal protection of the region in the 1980s, and the proposals of the Porto Maravilha project, which search for changing this protection through urban and road interventions that do not consider a big part of local cultural facts.

2. Usages in the 'proper places'

The construction of "a capital that did not embarrass us before the progressive and civilized countries." This was the objective pursued by the Brazilian elites since the second half of the 19th century. After the Republic Proclamation (1889), what seemed to be wished was "to leave behind, the lukewarm past, where there are no reasons to be proud of." [9] Considering this, it is designed the project for a grand future as a 'nation', which seeks an identity that it will have to possess – that it is predestinated to possess – based on its myths in order to present itself.

Following this mentality, at the beginning of the 20th century, the plans began to leave the drawing board and several urban interventions were carried out on the site of the central area of the city. These interventions consolidated in the Harbor Region the port functions practiced since the 18th century, and the one of cheap workforce repository, necessary to the economy and the social life of the city, among others. It was noticeable the gradual isolation of the region due to its association, in imagetic terms, with stevedores, prostitutes, immigrants, factory workers, slum dwellers, and African descendants. The proposed renovation, as mentioned before, implemented a real remodeling operation of the Downtown view, the 'reception room' of the new Republic. They followed the novel "economic and ideological determinations of the moment" and aimed at urgently equipping the city with means capable of making it attractive and economically competitive. To this end, among other initiatives, it became essential the construction of a new road system and a new port, as well as the 'modernization' of the looks of part of its urban tissue, which still had a colonial feature.[10]

In order to achieve the physical and social sanitation of Downtown, there were demolitions, constructions, soil fractionation, and, above all, the poor population settled in the area was expelled, transforming Downtown into an extremely valued area and a place of services, commerce, and large corporations. The slum tenements, the inns, and their 'undesirable' occupants – the poor – hastily disappeared from Downtown. Social contradictions were ignored and treated as mere issues of urban design, sanitation, and relocation of the poor to other areas, other than Downtown. The need to transform Rio de Janeiro into a symbol of the cosmopolitan and modern *modus vivendi* of the national elite would be the main concern of the Alves-Passos administration that generated, in a short period of time, "the greatest transformation ever seen in the city so far, a real urban renovation program" that transformed it into the true symbol of the "new Brazil." [11]

The construction of *Avenida Central* was the mark of this mentality. Its layout provided the connection between the new port – especially its passenger station, located at Mauá Square – to the now valued Downtown. The main entrance for visitors to the city was strategically placed in the section of the harbor region located at the beginning of the new avenue. Naturally, when the visitors arrived in the city, they were attracted by the architecture of the area, starting with Mauá Square, turning their backs on the harbor region. At the end of the avenue, the new cultural and political centrality of the Republic was gradually established, represented, among others, by the buildings of the Jury Court (1905), the Monroe Palace (Federal Senate 1906-1960), the Municipal Theater (1909), the National Library (1910), and the Pedro Ernesto Palace (1923) – currently the City Council –, besides the set of large cinemas built from 1924 onwards, known as *Cinelândia* – which became the most famous nightlife center in the country. From there, it was possible to access Beira-Mar Avenue, another building action by the Alves-Passos administration, which route connected Downtown to the southern area of the city, enabling the expansion of its urban occupation carried out in the subsequent decades. The harbor region concentrated, predominantly, the city's historic port functions, as well as the usages and services derived from them, established in the surroundings of Mauá Square.

Regarding the road system, the region was partially involved by Rodrigues Alves and Francisco Bicalho avenues, large arteries that made it possible to load and distribute goods from the new port without 'disturbing' the new Downtown. A kind of 'back door' that, from the 1940s, would have this function consolidated with the construction of Brasil Avenue – the exit door and gateway to the city – directly connected to Rodrigues Alves and Francisco Bicalho Avenues, in addition to the expansion of the original port towards Caju neighborhood. The 1940s also brought another large avenue to the central area – in fact, the largest one in the city – that replaced the old Larga Street (currently called Marechal Floriano Avenue): the Presidente Vargas Avenue, 88 meters wide and about four kilometers long. Designed to be the new corporate center of the city and the main road connecting Downtown to the north of the city, the new avenue became the stage for military and carnival parades. Its construction resulted in the demolition of more than 500 buildings (including São Pedro dos Clérigos Church and *Paço Municipal*), the destruction of the XI Square (*Praça Onze* in Portuguese), a stronghold of popular culture, and the establishment of a concrete demarcation between the valued stretch of Presidente Vargas Avenue/Cinelândia and the depreciated stretch of Presidente Vargas-Rodrigues Alves Avenues.[12] The new avenue completed the road belt imposed on the neighborhoods of Saúde, Gamboa, and Santo Cristo, along with *Avenida Central* (Rio Branco), Rodrigues Alves Avenue, and Francisco Bicalho Avenue (Mangue Canal). This belt prioritized the peripheral circulation to the mentioned neighborhoods, devaluing, isolating, and transforming them into crossing ones.

At the end of the 1960s, there was the extension of the Perimetral viaduct, from its initial stretch, which connected the XV de Novembro Square (*Praça XV de Novembro* in Portuguese) to Presidente Vargas

Avenue, until Brasil Avenue (over Rodrigues Alves Avenue), which later connected to the Rio-Niterói Bridge and the Linha Vermelha Highway, a road that takes to the Tom Jobim International Airport. The road system dramatically consolidated the crossing point aspect of the region. Drivers, on elevated highways, crossed it in minutes, without any contact with their view. It contributed significantly to 'hide' the region from the *carioca*'s look. This is the main feature of 'jump cut urbanism', characterized by prioritizing the easiness and speed of travel provided by cars – which, in turn, generate a 'semiotic crisis', establishing a series of 'mounting cuts' that fragmented cities.[13] The artifice became typical of any place where there are cars, but it is reinforced where the consolidated urban tissue was penetrated by the new automobile infrastructure that generates great interference and impact on the urban landscape: viaducts, highways, bridges, etc.[14]



Fig.1



Fig.2

3. The construction of the social frame of the Harbor Region

The consolidation of port activities in the region took place from the 18th century onwards, mainly justified for its position: strategically located in a place "close, but outside Downtown." The fact is corroborated by privileged geography characterized by inlets that had good anchorages, more sheltered than those around Castelo Hill, combined with the existence of not very steep slopes, which facilitated the occupation. In the second half of that century, the slave market was transferred from Direita Street (currently called *Rua 1º de Março*) to the Valongo Wharf (*Cais do Valongo* in Portuguese – in the surroundings of the current Mauá Square), effectively contributing to the transformation of the place into the center of this type of trade. Along with it, the area also received the 'cemetery of *pretos novos'*, a place of collective burial of the black newcomers to Brazil who did not resist the mistreatment resulting from the long trip. The Aljube Jail, which operated from 1731 to 1856, was also located in the region. The prison was exclusively aimed at rebel priests and offenders and was situated on the current Acre Street (former Aljube Street). The gallows, the destination of those confined in Aljube, were located in Prainha (at Mauá Square surroundings). Due to its sad memories, the city's chroniclers expressed their dread for the region saying that 'it was always bad'. João do Rio, in one of his night tours around Downtown, stressed, in relation to the region, "(...) an impression of vague horror", linked to crime.[15] The list of these activities contributed significantly to the consolidation of the 'dirty usages' in the region, characterized by "essential roles to the functioning of the city, which, by being distinguished by the degradation of areas, by the noise or visual pollution, should be close to Downtown, but not so much as to tarnish its symbolic image". As a result, the harbor region reached the 19th century in opposition to the current XV November Square (former *Terreiro do Paço*), the site of major royal events (and later, imperial events), hosting the city's maximum institutions.[16]

3.1 – Where the poor and the socially excluded live

Another crucial aspect for the configuration of the harbor region was the emergence of Favela Hill (currently called Providência Hill), around 1897. The place started to house a low-income population formed, initially, by former combatants of the military campaign of Canudos, who were authorized by military chiefs to settle in the area despite the lack of authorization by the city authorities. The concession was granted as a benefit related to services provided to the country.[17] The proliferation of slum tenements in the region also began to characterize the local landscape, with emphasis on the one known as *Cabeça de Porco*, the largest slum tenement in the city, and that was demolished in 1893 as a result of the construction of the João Ricardo tunnel, connecting the Downtown area to the Harbor Region. At the time, the region already offered cheap housing, based on the appeal of being a place "close, but outside Downtown" and therefore, accessible to the 'opportunities' offered by it. The harbor region already had its image associated with the 'necessary evils' to the city, essential for the increase of capital – that is, a cheap workforce (housed in permitted sub-dwellings), and activities considered 'undesirable' in sight.[18]

At the beginning of the 20th century, the construction works for the new port intensified the housing occupation in the neighborhoods of Saúde, Gamboa, and Santo Cristo, characterized by a resident population basically formed by stevedores, sailors, prostitutes, and other people, mostly African descendants, whose activities were directly or indirectly linked to the port and commercial functions. These groups were housed in slum tenements, *casas de cômodos,* and inns that effectively contributed to the formation of a social tissue unacceptable to the conservative standards of the *carioca* elite.

It is important to point out a large number of black people, originally from Bahia, who initially settled down in the vicinity of *Pedra do Sal* area forming a stronghold of the workforce used in the stowage of the docks, and African cultural traditions, linked to the origins of the samba in Rio. In this urban context, *Pedra do Sal* and its surroundings assumed great cultural importance in the formation of the samba of Rio, welcoming renowned inhabitants such as Tia Ciata (who lived at 286 Senador Pompeu Street), João da Baiana, among others. A community of black immigrants and their descendants was formed in the region, named as 'Little Africa' by Heitor dos Prazeres, and which stretched from the wharf area to Cidade Nova, having XI Square as its 'capital' – which was destroyed by the construction of Presidente Vargas Avenue, as previously mentioned.[19] It should also be highlighted that XI Square was the place where a large community of Jewish merchants settled down.

According to reports from that time, the region was inhabited by "(...) strong and violent black men, sweaty loaders, obsessed by addiction." The activity of prostitution, associated with the dreaded slum tenements, was added to the characteristic frame of social prejudice related to the region. According to Marli Albuquerque, it was considered in the period that all and "(...) any kind of social contempt and misdemeanor" were committed in the region, "with prostitutes dwelled on the windows of the 'infected' slum tenements, located along alleys and gloomy hillsides." Another significant population group located in the area was made up of Portuguese immigrants, associated with small retail trade. Conceição Hill, a place of an urban landscape with a Portuguese appearance, started to concentrate a large part of this population. This rich cultural scene developed in the region justified the social segregation of the harbor region from the rest of the city. It became a prohibitive place for the

presence of ‘respectable people’ except on a mission of material or spiritual assistance, aiming "to make those men 'civilized and kind'." [20]

Taking into consideration the context for the occupation of the area, it is also worth mentioning the inauguration of the first stretch of the Dom Pedro II Railway (currently called *Central do Brasil*), in 1858. This fact allowed the expansion of the city towards suburban neighborhoods, also benefiting the port activities that were connected to them. Due to the facilities provided by the proximity to the port, the railway network, and Downtown, several factories were also installed in the region, bringing their workers, who reinforced the already established trend of occupation by architectural typologies related to low-income proletarian housing (villages, slum tenements and inns). In the 1920s, the proletarian presence in the region was already consolidated and was perceived through the massive presence of stevedores at the docks and workers from the factories installed there. The place also started to be characterized as a place for strikes and rallies that took place especially at Mauá Square.[21]

Due to these social and economic aspects, the region has transformed itself into the place of ‘*marginália’*, which was immediately and directly associated with the harbor region and factory production. This aspect contributed to the stigmatization of the area by the State as “cursed, consumer of lives, pestilent, where the outbreaks of yellow fever were located.”[22] The construction of a devalued place frequented by marginalized and poor people, occupied by polluting and ‘dirty’ activities, left a legacy of discrimination to the ‘harbor region’ in the urban and social context of the city – consolidated, as mentioned, with the construction of Presidente Vargas Avenue. The extreme urban intervention promoted a physical rupture in the urban tissue of Downtown, corroborating the limits previously imposed by social prejudice built over centuries. Thus, a physical barrier was formed, more than eighty meters wide and four kilometers long, which discouraged pedestrians from crossing it towards the harbor region. In social terms, the construction of the new avenue continued the strategy of expelling the poor from the central area, initiated by the Old Republic.[23] The necessary demolitions for the construction of the new road displaced a considerable contingent of workers who sought accommodation in the degraded peripheral areas in Downtown, in the northern zone, and, especially, in the neighborhoods of the harbor region and its slums. The phenomenon contributed substantially to the worsening of the social scenario of this region of the city.

As already referred, throughout the 20th century, other road interventions threatened the integrity of the region's landscape, consolidating the idea of the municipality that it was a mere crossing site, a connection to other parts of Downtown and that the car was the definitive solution for the articulation and the communication between the different neighborhoods in Rio. The region remained ‘hidden’ from the eyes of Rio’s population in general and from the media until the second half of the 20th century, thence reaffirming every day its fault of being an inappropriate, unpleasant, and socially and economically degraded place. The abandonment by the City Hall conditioned the formation of urban social movements in favor of the permanence of the resident population, the improvement of the occupation conditions, and the protection of the cultural heritage of the region.

4. Community versus corporate interests

The comparison between the ‘old city’ and the ‘modern city’ provided the construction of the conceptual identity of traditional urban areas in Western cities. The losses caused by the transformations inherent to modernity enabled city users and theorists to compare what it was and what it has become, pointing out to the identification of values in low densities and smaller scales.[24] The ‘historic’ and ‘non-historic’ categories made feasible the demarcation of protected sites, governed by urban and building parameters aimed at conserving the intrinsic qualities of the architectures and the low densities of the ‘old city’. The demarcation was able to save them from destruction; however, it is clear that the city as a whole constitutes a historical object and must have good quality in its entirety and not only in the sites considered ‘historic’.[25] These sites must be integrated and not isolated by obsolescence or ‘museumlization’. The opposition between ‘renovation’ and ‘conservation’ associated the first with ‘modernity’ and ‘progress’, and the second with the freezing and obsolescence of parts of the cities’ urban tissue. It is necessary to integrate protected areas to the dynamics of the cities, starting from the updating of the original structures – without, however, neglecting their traditional social tissues, responsible for building the spirit of the place –, hence ensuring the existence of diverse and integrated environments.

The harbor region, owning to its historical trajectory, was the object of conflicting feelings. On the one hand, there was the contempt of the *carioca* elite and, on the other, the affection of its traditional residents, representatives of the oppressed social classes. Throughout time, this population transformed the region into a place for cultural events and distinctive ways of living, differentiating it from the rest of the central area of the city. The aforementioned opposition originated, in the 1980s, a clash between local populations organized in residents' associations and the City Hall, revealing contrasting interests – having as a backdrop the decay of the port functions developed on the original wharf, along Rodrigues Alves Avenue, and, later on, its privatization. From its side, the Rio de Janeiro Commercial Association (*ACRJ* in Portuguese) defended proposals for a total urban renewal in the region, considered degraded and deficient, by means of building legislation that induced the extreme

verticalization of new buildings. At the same time, local communities organized in residents’ associations were fighting for the preservation of the vast cultural heritage of the region, strengthening residential usage and improving infrastructure and security. In 1985, local communities achieved an expressive victory with the legal protection of the neighborhoods of Saúde, Gamboa, Santo Cristo, and part of Downtown, first by a municipal decree and, later, by a municipal law (1987). The achievement, combined with the severe national economic crisis, temporarily cooled ACRJ intentions.

In 1993, there was a partnership between the City Hall and *ACRJ* for the elaboration of the first Rio Strategic Plan, concluded in 1995 (entitled *Rio Forever Rio*). This revealed a drastic change in the city’s governance, which started to adopt the principles of urban entrepreneurship as a way of generating jobs and income – thereby replacing the traditional usage of the administrative governance, represented by the Ten-Year Master Plan (1992). The next administrations chose to host major events as a priority, with an emphasis on the Olympic Games, which would insert the city on the international scenario, boosting the tourism industry, among other businesses. In 2009, the city, after hosting the 2007 Pan American Games, finally won the right to host the Olympic Games. In the same year, Brazil was also chosen to host the FIFA World Cup, with Rio de Janeiro as one of the venues.

In this context, in 2009, it was published the city's second strategic plan, officially called “Rio post-2016 – the most integrated and competitive Rio”. In the text of the new Plan, there is, among other actions, the conservation project for the harbor region called ‘*Porto Maravilha’*, as a goal to be achieved and linked to the fulfillment of the Olympic Games (2016). It is noticeable a series of urban and administrative actions to be adopted by the municipality, which revealed that for the municipal administration, the area only deserved investments regarding the updating of infrastructure and urban renewal. The City Hall, by municipal law, transferred the management of the AEIU of the Porto Maravilha Project to the Urban Development Company of the Harbor Region of Rio de Janeiro (*CDURP* in Portuguese), transforming the harbor region into an independent district from the city’s administrative context. *CDURP* is now responsible for making part of the land in the area available for the real estate market, and for fostering the economic and social dynamism of the region, in addition to allocating, in order to enrich the cultural heritage of the region, 3% of the income from Onerous Grants (*Outorga Onerosa* in Portuguese), resulted from the sale of Certificates of Additional Construction Potential (*CEPAC* in Portuguese) – which allow the owners of a large part of the land located in the retro area of *Porto* to extrapolate the maximum gauge established in 30 floors, reaching a maximum of 50 floors. These resources were applied in the restoration of some monuments, disregarding, however, the group of about 1,500 buildings protected by APAC and its occupants, mostly tenants.

It is worth emphasizing that the euphoric atmosphere among entrepreneurs and administrators created by the major events was able to align the public agencies of the three administrative spheres in order to make the project feasible. The political environment generated by the option of the City Hall for an entrepreneurship approach contributed to the prioritization of corporate interests to the detriment of the community members, besides cooling down the actions of residents’ associations of the region in their struggles for local improvements. Even so, in the case of the harbor region, there were community manifestations contrary to the Project, considering that, at no time, it included in its scope the analysis of the social aspects associated with the region, here previously cited. Despite the worrying social situation associated with the Project, those in charge of its implementation only focused on the positives results. The senior management of *CDURP*, for instance, believed that imminent gentrification of the region could be ‘neutralized’ with the development of professional qualification programs, insertion in the labor market, support to the region's small and micro-entrepreneurs, among others initiatives that never got to be effectively implanted.[26] It is important to highlight that the economic crisis that occurred in the country after 2016 – and has been aggravated by the effects of the pandemic of the new coronavirus – significantly affects the development of the Project, directly dependent on private contributions. Regarding the protected architectural sets, there is a worrying situation related to the area’s progressive deterioration and underutilization, which shows its clear emptying, despite road interventions carried out in the region.

The aspects discussed herein offer means of reflection on the current urban and social situation in the harbor region, neglected by the Porto Maravilha project. Once again, the City Hall of Rio de Janeiro is unable to perceive the social and physical complexity of urban areas that are the object of conservation operations, prioritizing corporate interests to the detriment of community members. The name ‘Porto Maravilha’ materializes the official attempt to highlight positive aspects of the project for the population of Rio de Janeiro in general, except for the local population, which once again finds itself excluded from accessing the city's urban improvements.

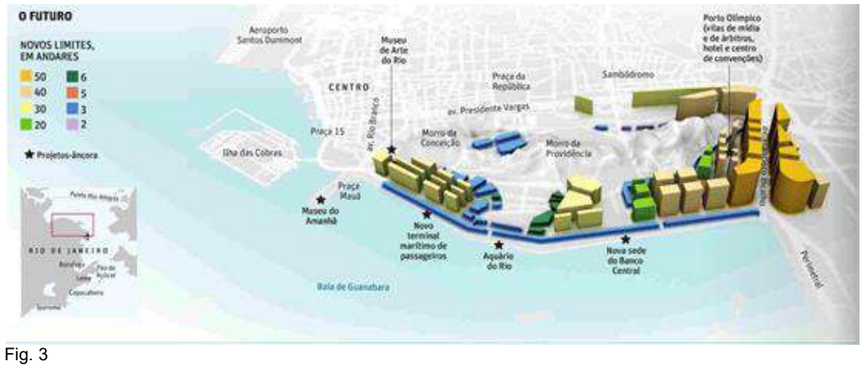


Fig. 3

Notes

1 *Sagas* is the acronym that originated from the names Saúde, Gamboa, and Santo Cristo. The neighborhoods were initially protected in 1985, by the Municipal Decree 5,459, and later, in 1987, protected by the Municipal Law 971, regulated by Municipal Decree 7,351/ 1988.
2 In this area, it is located the Favela of the Providência Hill, considered by historians the first large subnormal settlement in the city that was originated by former combatants of the Canudos War (1893-1897), which took place in the hinterland of Bahia, who obtained permission from the federal government to occupy its slopes.
3 In relation to the historic neighborhoods, the types of functional and imagetic obsolescence stand out. The functional one consists of the fact that the building is no longer able to meet the contemporary demands arising from the originally designed usage. In the case of residential usage, the physical inability to house elevators, air conditioning equipment, among others. The imagetic obsolescence is related to the perception by the general population of functional obsolescence. S. Tiesdell et al, Revitalizing Historic Urban Quarters (Oxford: Architectural Press, 1996), 22.
4 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 63.
5 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 66.
6 These are the cases of Corredor Cultural, Cruz Vermelha, and nearby.
7 Residential usage was allowed again in the 1990s, but there are still no changes in the occupation of typical houses of the beginning of the last century, which occupation, originally, mixed commercial (on the ground floor) and residential (on the upper floors) usage. They maintain a framework of underutilization, harboring only commercial usage.
8 Aldo Rossi, Arquitetura da Cidade (São Paulo: Martins Fontes, 1998), 37 e 194.
9 Carlos Nelson F. dos Santos, A cidade como um jogo de cartas (São Paulo: Projeto, 1988), 40.
10 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 66.
11 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 60.
12 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 114.
13 Jump cut is a term from the cinematic language. It is an artifice that has the purpose of advancing some action by cutting in the edition, with the objective of removing parts of an outlet and generating two plans with a sudden transition between them.
14 Richard Ingersoll, Tres Tesis sobre la ciudad (Madrid: Revista de Occidente,1996), 11 a 44.
15 Elizabeth D. Cardoso et al., História de Bairros: Saúde, Gamboa e Santo Cristo (Rio de Janeiro: Index, 1987), 21.
16 Nina Rabha, Cristalização e resistência no centro do Rio de Janeiro (Niterói: Eduff, 1985), 36.
17 Lycia do Valladares, A Gênese da favela carioca. (Rio de Janeiro: RBCS, 2000), 26.
18 Nina Rabha, Cristalização e resistência no centro do Rio de Janeiro (Niterói: Eduff, 1985), 36.
19 R. Moura, Tia Ciata e a pequena África no Rio de Janeiro (Rio de Janeiro: Secretaria Municipal de Cultura, 1995), 93.
20 Marli B. M. de Albuquerque, Porto do Rio de Janeiro: estigma e história (Niterói: Eduff,1985) 88.
21 Elizabeth D. Cardoso et al., História de Bairros: Saúde, Gamboa e Santo Cristo (Rio de Janeiro: Index, 1987), 125.
22 Marli B. M. de Albuquerque, Porto do Rio de Janeiro: estigma e história (Niterói: Eduff,1985) 88.
23 M. de A. Abreu, Evolução urbana do Rio de Janeiro (Rio de Janeiro: IplanRio, 1987), 113.
24 F. Choay, A Alegoria do Patrimônio (São Paulo: Unesp, 2001),179.
25 G. C. Argan, História da Arte como história da cidade (São Paulo: Martins Fontes, 1992), 215-216.
26 Camilo Gomide, Rio de Cara Nova, Revista Planeta (São Paulo: ed. Planeta, 2015), 46-47.

Image Captions

Fig. 1. Above. Floriano Square: National Library, Federal Court of Justice), final stretch of Rio Branco Avenue, Monroe Palace, *Cinelândia* buildings (among them *ODEON* and *Amarelinho*) and Pedro Ernesto Palace (Olínio Coelho's Collection). Source: http://www.conexaojornalismo.com.br/noticias/palacio-monroe-o-maior-crime-contra-o%20patrimonio-carioca-1-2236. Accessed on November 13, 2016. Below. Rodrigues Alves Avenue, n.d., Col. Elysio Belchior. With its 40 meters wide, Rodrigues Alves Avenue, apart from Francisco Avenue, was the widest in Rio. Dezouzart Cardoso et al., História de Bairros Saúde, Gamboa e Santo Cristo, João Fortes Engenharia/Índex, 1987, p. 120.
Fig. 2. Configuration of the road set that defined the hierarchy of spaces in the Downtown Area of Rio de Janeiro, isolating the neighborhoods in the harbor region. Source: Google Maps, author, 2015.
Fig. 3. Simulation of Rodrigues Alves and Francisco Bicalho Avenues with the occupation of new buildings allowed with a size between 30 and 50 floors. Source: pavimentos.http://www.imovelrj.com/revitalizacao-do-porto-do-rio-porto-maravilha/. Accessed on November 13, 2016.

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(Post) Studio architecture
Buren VS Warhol

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Abstract

This article will discuss that there is a false dichotomy between two models of artist studios, that oppose the private and the public, doing and thinking, hiding and revealing. The modern studio, historically mythologized as a prominent place of personal creativity, was harshly criticized in the late 1960s with the advent of performance, conceptual art, land art, and minimalism. This space represented a type of practice, material production, and creative identity, which some artists wished to replace or avoid altogether: isolated genius, manual labor, and a restrictive, romantic, and masculine context.

It was the French artist Daniel Buren, who in 1971 finished his essay "Function of the Studio", stating that his work came from "the extinction" of the studio, leading to a change in the relationship between his architecture and the creative process. Now, his workspace would have a mobile, open, and extended spatial condition in the city, it would be *in situ*.

However, the link between the artist and his creative space is not as clear and absolute as it seems to be implicit in the overly broad term "post-studio". On the one hand, artists such as Andy Warhol maintained a complex relationship with their workplace, their aesthetics, and their urban links - this is the case with Silver Factory (1964-1968); while on the other hand, Buren has not taken such a radical distance from the studio as he is wont to claim.

It will be demonstrated that there is a permanent interaction, superposition, and dialectic between both positions, which enables an alternative architectural understanding of their conception. In this way, it will become evident that even at the moment when it is intended to be left behind completely, the modern studio, with its many connotations and mythology, has continued to be a reference for artistic production and identity.

Keywords: Studio, Post-studio, Buren, Warhol, Creativity.

Daniel Buren and the studio in the city

"My studio is, in fact, where I find myself."[1]

The artist's studio, historically venerated as the par excellence venue for personal creativity - from the 17th century in Europe to the 20th century in America - would be subject to harsh criticism in the late 1960s. When the artists started questioning the traditional and conventional modes of production, presentation, and experimentation – by conceptual art, performance, land art, pop art, and minimalism - this led to a new understanding of artistic creation and productive spaces. The studio represented a powerfully charged semi-sacred place for the solitary genius artist, illustrated by the "ivory tower" concept from the 19th century.[2] A kind of practice with a manual or artisanal work in a romantic and masculine context.[3] At the same time, painting and sculpture - with their tools and techniques - traditionally considered studio-arts, were believed to be finished and irrelevant when the concept of "art as an idea" penetrated artistic production.[4] In this sense, the power of the idea – in the era of the Civil Rights Movement, the Women´s Liberation Movement, May 68, and counter-culture, among others - was at the core of the attempts to escape from cultural confinement, and in arts that meant the heroic and mythologic studio.

French artist Daniel Buren (1938) defined in his 1971´s essay "Fonction de l´Atelier" the artist's studio in terms of frames, envelopes, and limits.[5] As a standard-bearer of institutional critique,[6] he saw these conditions as stifling and untenable. Buren ended his essay stating that all his work proceeded from the "extinction" of the studio,[7] implying a change in the relationship between this architectural space and his creative process. Buren developed his argument in the text comparing, among other things, the typical Parisian model of the late 19th century, with the (north) American lofts appropriated clandestinely from the 1950s onwards. The French style studio - or European - was large and very high with a maximum of natural light; and the New York studios were lower in their ceilings but much broader in horizontal proportions,[8] and they used electrical lighting. Buren also noticed that the latter had already started to gain popularity in Europe, as he was involved in the exchange between the two "art capitals". These connections included international exhibitions,[9] cultural relations,[10] and specialized magazines such as "Les Lettres Francaises" publishing articles about north-American artists.[11] According to Buren, both types of studios should be left behind completely. He perceived the modern studio as an institutional disguise, a normative convention serving an ideological function. As if the architectural features of the studio were deemed to be coded mechanisms that actively disassociate the space of art from the outer world. As the studio's death was officially declared, the birth of the "post-studio" era was being announced.[12]

Buren's words seem to be consistent with his artistic practice. Six years earlier, he had switched from painting to "travail in situ"[13] demonstrating a voluntary link between the place of production, presentation, and exhibition. In 1965, the artist found a canvas in Saint-Pierre's market that alternated white and colored vertical stripes responding to the concept he was pursuing: an inexpressive industrially-made module with a formal pattern of 8.7 centimeters wide.[14] With this material, in 1968 Buren created the "Affichage Sauvage" consisting of the partial covering of two hundred billboards in Paris without legal authorization or invitation from a gallery or institution.

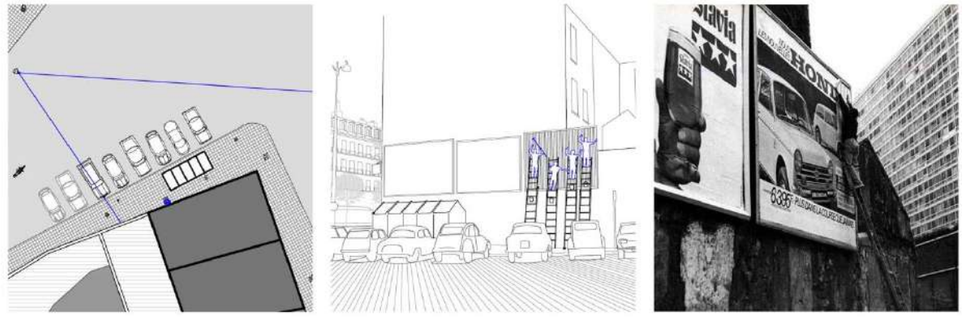


Fig.1

One of Buren's photographic records of this type of work is a black and white sequence from an intervention called "Affichages sauvages recouvrant cinq panneaux publicitaires" in rue Mouchotte.[15] This area was part of the Maine-Montparnasse operation, a major urban renewal conducted on the public authorities' initiative and a significant transformation of the Parisian landscape in the 20th century. Buren acted directly on a "Dauphin" billboard with a Honda ad, alone, using a long ladder, a bucket of glue, and a mop. The photographic footage shows how he covers the entire four-by-three meter

advertising poster, finally leaving an enigmatic gesture that appropriates the space where thousands of people would be passing continuously. This urban site was transformed momentarily into a public workspace and a temporary exhibition, with art as an advertisement - mimicking its condition, size, and positioning - for the ambulant spectator (Figure 1).

Buren reinvested the advertising billboard as he seemed to counter the communicating intention of posters with mute and messageless vertical stripes. The proposal manifested neutrality, semantic negation, and a minimal material presence that charged with meaning the public environment where it was displaced. Buren's work intended to compete with the network of urban signs found in the streets of Paris, when this scenery was the site of a struggle for political affirmation during May 1968. The uncontaminated and idealist space of positivism was superseded by the ordinary and real space of everyday, relocating the meaning from the art object to its context contingencies. The main quality of Buren´s work on-site was to literally and metaphorically stick to the reality of the place where the artwork was produced and exhibited. However, beyond creating spatial margins for his works on the "expanded field",[16] Buren shift from a fixed, confined, domestic-scale workplace to a mobile, open, and urban situation.

Within the institutional criticism raised by Buren, the studio was an exception. It was the only organ of the artistic apparatus that he declared (dramatically) to be superseded, even extinct.[17] He intended to exceed traditional media's limitations and their institutional setting while questioning the art object's supposed autonomy. His artwork ceased to be a model to become a live performance, that is, something that once it has happened it is no longer possible to re-edit or perpetuate by means conservation. Through his "travail in situ", Buren proposed a postponement of the city's monumental, fixed, and timeless image for the benefit of its continuous experimentation as an event.[18]

What Buren had done was not to show an artwork directly on the walls of the city, but to provoke reflection from the contemplation of the background, the architecture, and the city surrounding, that is, to transfer the narrative of the work to the context. His work implied a movement from the canvas to the wall (other architectural elements such as doors and windows followed), from painting to space, from the studio to the city. Buren´s exploration between painting and architecture became evident when his canvases were spread out in public space, so they developed into three-dimensional volumetric objects, reinforcing Buren´s statement that his “work is about space”.[19]



Fig.2

The idea was to hide the advertising image through a material so neutral that it would not be possible to evoke anything other than its absence. Working on advertising billboards meant exposing the work to all the risks of the outside, of everyday life, of reality. Buren’s relationship with the city was contrary to Baudelaire's asymmetrical idea written in his foundational text *The Painter of Modern Life*,[20] where the artist who observed reality maintained dominance over the observed. Buren aimed to achieve a meaningful exchange of equals between the artist and the urban fabric.

His work on-site no longer required a studio, so he got rid of his former one in Cité des Fleurs in Paris, a small attic with a sloping glass roof (actually demolished).[21] Nonetheless, since then, Buren has occupied an office, which can be seen as one of his photo-souvenirs collection (Figure 02). This photograph shows a desk placed in the corner next to a radiator, a chair, a phone, a mess of papers, a board with pictures, books and magazines, a drawing, and a map: just as any other low to middle-rank manager in a corporation. Only big enough to fill out forms and write letters,[22] this corner office represents Buren's desire to be considered just any other white-collar worker.

Andy Warhol and the city in the studio

“It’s just taking the outside and putting it on the inside, or taking the inside and putting it on the outside.”[23]

Although Buren first-named Andy Warhol in an interview in 1972,[24] he presumably knew his work by the time he wrote “Fonction de l´Atelier”.[25] And respectively, the most famous and influential loft-style studio: Warhol´s Silver Factory in Manhattan. Although other North American artists´ studios of the 1960s, and even previously, were lofts of similar conceptions - illegal appropriation, creativity extended to domesticity - and spatial organization - eclectic and neglected ornamental facades, deep warehouses, cast iron structure – Warhol´s Factory remained as the primary metonym of New Yorks´ loft studio.

In mid-January 1964, Andy Warhol rented a place used by a former hat factory on the fourth floor of 231 East 47th Street for one hundred dollars a year. This industrial space was defined only by four central pillars and three arches; a free height of approximately three and a half meters; a door that led to the hall where the interior stairs were located; a second door from which there was direct access to the freight elevator; and a facade with five windows and an emergency exit that led to the fire escape. The walls that defined this space were made of exposed brick, and the pillars - as well as the openings - of cast iron.

Warhol commissioned Billy Linich, a former lighting technician who had worked on theater productions, to design the interior space. At the back, and with a light wooden structure, he installed a bathroom and a dark room for developing photographs (Fig.3). Then he started silvering with paint almost everything: walls, ceiling, tables, chairs, toilet, telephone, photocopier, and even the floor, which he had to repaint every two weeks due to the heavy traffic of people.[26] The few things that remained, such as the openings, were covered with silver paper. For Warhol, that color meant the past, a reminder of the industrial aesthetic of his native Pittsburgh; the present, the mirror reflection, narcissism; and the future, space, astronauts, the machine, and glamour.[27]

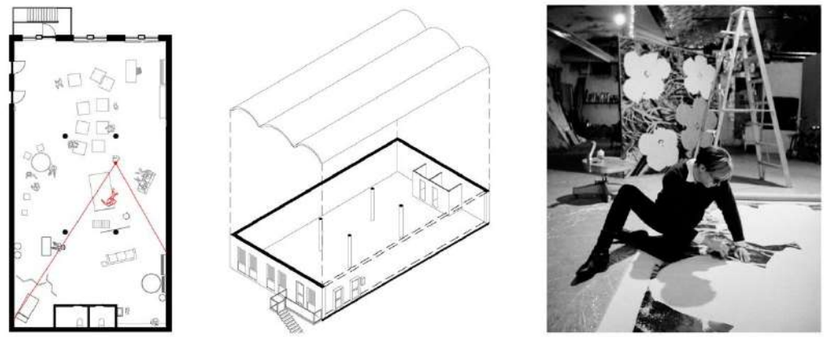


Fig.3

Linich also furnished the space, mainly with longstanding equipment left by an old tenant, things he and Warhol brought from home and especially from the street: a mirrored ball, the bottom of a mannequin, an audio player, speakers, iron weights, lockers, a wooden ladder, toys, an exercise bike, a vacuum cleaner and a broom, several mirrors, a motorcycle, a fan, plywood sheets as scenography, among other things.[28] One of the critical points of putting power relations in crisis lies in altering the social and practical functions of the objects´ symbolic values. Just as replacing a rectangular dining table with a circular one cancels out a dominant family position over others, a couch in the middle of a vast industrial warehouse reformulates the concepts of comfort, privacy, or intimacy. In the Silver Factory, objects from different environments - contradictory and disparate - composed a chaotic landscape that combined the popular and the distinguished, the functional and the useless, the adjusted and the exaggerated, the new and the obsolete.

The intentionally imposed name “Factory”,[29] wished to displace the studio's charged and narrow trope with another broader term that would encapsulate a new conception of creative production. The loft presented an austere, flexible, adaptable interior architecture and minimal facilities. Its open floor plan's abstraction allowed a constant redesign and simultaneous activities nearby, such as stage filming, rock rehearsals, screenings, recordings, open lectures, and silk-screening canvases. In this sense, Ábalos wrote in his book *The Good Life*, that this space represented the negation of the specific and technified square meter of modern architecture and the valuation of the cubic meters without qualities of any kind.[30] In contrast to the spatial fragmentation with which the functionalist project was resolved, intimacy was reduced to a minimum. It was understood as a consequence of the modern hierarchy, the old paradigm of the artist in isolation, and the bourgeois way of life.

It is not easy to imagine the atmosphere at The Silver Factory without the visual support of Warhol himself, or the iconic photographs of Billy Name, Stephen Shore, and Nat Finkelstein. Together they documented their daily lives and participated in its construction.[31] When we look at their photographs, a disorienting effect catches us, it is difficult to detect the point from which they were taken, and it is only possible to determine this through details; for example, the location of the telephone near the access door. There is a deliberate attempt to generate artificial isotropy - by covering all surfaces with silver - to be used as a new spatial component for creative work (Fig.4). It is important to emphasize that the lofts' explicit enclosure had nothing to do with a distance from the real city, but with a disconnection from the productive cycle in established and specific days and times.

Warhol was the one who legitimized the people around him, involved them with the city, and encouraged artistic, experimental, and collective production. However, his most outstanding work was topological: creating a physical background of liberation. Everything produced there, even if its participation was nil or minimal - indicating who would work on each project, and the more people, the better - was automatically his. Warhol became a visual supervisor, an image controller, or a director. Even if he was rather an indifferent one, who took on a passive, casual, and even irresponsible leadership, he acted as an artistic production manager, not as a real “assembly line” worker.[32] Each project - over six hundred films, hundreds of paintings and sculptures, a record, a book, and hundreds of photographs - carried his aura and would have been impossible without him, while, paradoxically, each creation highlighted the creative process as an essentially social experience.



Fig.4

Contrary to what is generally believed, The Silver Factory was for Warhol “a vacuum” that left him “alone to work”,[33] and at the same time, a place where “Friends come over…and do the work with me.”[34] Warhol fed creatively on the oscillation between isolation (the place was not always open) and a workplace that included a celebration and impromptu partying as one of its social manifestations. Warhol´s new artistic vision, which included his cultural criticism and distance from social rules, could not have happened without disconnection from reality; but also without an intense return to the superficial and consumerist society to which he also belonged. That is why we find Warhol´s such contradictory phrases, even in the same interview,[35] as “I´m trying to do business here at the Factory and lot of people just come up and sit around and do nothing. I just can´t have that, because of my work”,[36] and “I don´t really feel all these people with me every day at the Factory are just hanging around me, I´m more hanging around them”.[37]

In 1964, when Warhol reached the peak of Flowers´ silk-screened production (nine hundred paintings over June and July), there were as many as fifteen people in the afternoon, filling in the colors and stretching the canvases.[38] Moreover, people would gather after midday waiting for Warhol to arrive so that they could capture his attention and participate in his projects; the regulars hung out in the evening; other people were invited to watch film shooting and screening; and Billy´s amphetamine parties took

over after midnight. By the end of 1967, and due to Warhol´s focus on films rather than painting, The Silver Factory was no longer under the influence of Billy Linich and Gerard Malanga (his earlier assistant), but rather by the aspiring filmmaker Paul Morrisey. He thought that space should be more under control to become a movie-making business enterprise.[39] His solution would be a change in the site´s architectural layout, installing partitions up to one-third of the floor space, dividing the loft into several little “office” cubicles. The result could not have been further from his intentions: people started using the compartments for having sex.[40] This effective experiment marked the end of an era. Simultaneously, this was reliable proof that this place, given its peculiar characteristics, could not have functioned with any other spatial distribution.

Warhol took over the city and lived in its center. The character of his studio was anti-marginal, but at the same time, nobody occupied a specific space, nobody had a reserved seat, there were no established schedules, and the rotation of people - of different origins, ages, professions, education - meant a representation of the city itself inside the studio. This collaborative core allowed for new layers of artistic work that Warhol could not have done alone. For every innovative creation, there were hours of tedium and dozens of artworks that were discarded. Art was understood as part of everyday life, changing how the place of artistic creation was interpreted, now linked not only to an architectural site but also to a specific urban territory.

Conclusions of a possible contradiction

Buren’s artistic practice and Andy Warhol’s studio demonstrate a permanent interaction, overlapping, and dialectic between two falsely opposed models: the modern art studio and the post-studio. By analyzing both through their translation into unpublished plans, we can confront the architecture of these creative spaces and their conceptions. Still, this does not necessarily imply an oppositional choice. We can see that the artists have engaged different strategies for showing certain aspects of their practice through them (the artist’s change of role, for example), while carefully hiding others (the perpetration of authorial, for instance).

Buren announced his complete rejection of the studio on the basis that it was the unique place for the creation of artworks that were compromised by the requirement to adapt to an unknown destination: whether a museum, gallery or private collector´s wall. He understood the studio unilaterally, as a hermetic enclosure that embodied the suffocating limits of art’s conceptual, material, and socio-political potential. Consequently, he preferred nomadic working in the city´s open, historically, and socially charged space to conceive a public and performative artwork. On the other hand, Warhol, far from conceiving his studio as a restrictive context, considered it generative. The Silver Factory was an unstable and evolving context, but at the same time, the material substance and medium for Warhol’s art. Its atmosphere of significances nourished on art, as well as art nourished from it, in a never ending cycle. The Silver Factory was not a frame. It was an active art form.

The design strategies used by Warhol and Linich, such as the search for artificial isotropy, decontextualization (of objects, spaces, and people), and interior indeterminacy, allowed truly experimental processes and results that transformed the artists´ conception of their practice and environment. The Silver Factory invited the social viewing of paintings, objects, and films, rather than a solitary contemplation of the artist in his “ivory tower”.[41] Using an abandoned loft as a studio that juxtaposed production and exhibition in a single location, constituted from the beginning - in addition to an opportunity for architectural reprogramming - a provocative and parasitic action towards his own contemporary culture. Instead, in the face of the productive-exhibitive duality of studio-gallery/museum, Buren favors the disappearance of the space that the artist can control, arguing that the works created in the studio were “portable” and “manipulable”. Nevertheless, given the fear that the work will follow a different path than the one the artist originally intended, wouldn't it make more sense to exhibit the work in the same place where it is produced, to transform, even if temporarily, the studio into a gallery, and finally achieve the goal of controlling the work's exhibition space?

Buren did not involve large numbers of people in creating his artworks - with the sole exception of friends or disciples - and in this sense, he remained within the limits of the artist´s classical role as a sole executor. Although he recognizes the influence, impact, and meaning of the productive context on the work of art, his *oeuvre* is still, paradoxically, the result of authorial action. The studio’s supposed disappearance in his work was the new starting point, even if that meant giving up the individual artistic creation process. Therefore, the studio could be considered as one of the most essential and, at the same time, fragile aspects of Buren's practice: its extinction becomes incarnation. He *is* his studio. Likewise, Warhol provided an unstructured space for a production line that could go on working only needing his managerial endorsement, as his statement said: “I think somebody should be able to do all my paintings for me”.[42] The Silver Factory served to build and shape both individual and collective identity, but paradoxically, the space was structured by Warhol´s particular desires, who wished to

control only the initial conditions, not the outcomes. When he changed his vision, he exhausted the loft-studio authentic model.

This text considers the different socio-historical, intellectual, and aesthetic contexts in which each artist elaborated his strategy and related their work to contemporary concerns. While Buren focused on a less physical and more institutional dimension of modernity, underlining its codes and events, Warhol worked at the expense of a system that he also nourished, and was not ashamed in its open recognition; although at the same time, he was trying to push its boundaries.

It is fair to say that the studio is, in many ways, the birthplace of art, but it would be wrong to believe that its only function is to be a place for the creation of artworks. Nor is the studio the only place where art can be made. The turning point in the artistic production of Buren and Warhol offers us a new understanding of the studio's role and meaning, of its nature and identity. The conventional model was not dismissed or substituted by a completely new one; instead, the existing possibilities were revised and redefined. Warhol's studio could be considered in this sense a precursor of the post-studio, rather than a counteracting causality.

In short, this article is marked by the belief that the studio cannot be so easily discarded, at least beyond verbalizations and manifestos: the artist is forced to deal with this *topos* in one way or another, through a critical commitment to its multiple antecedents, and to the different ways in which it has been used, exhibited, or represented by artists. This commitment forces us to visit the studio, again and again, in an exercise of reflection and architectural criticism.





Fig.5

Notes

1 Daniel Buren, "Entretien avec Phyllis Rosenzweig", 1988, in *Les Écrits (1965-1990). Tome III: 1984-1990*, ed. Daniel Buren and Jean-Marc Poinsot (Bordeaux: CAPC Musée d´art contemporain de Bordeaux, 1991), 357-359. Trans. by the author: "Mon atelier, en fait, est le lieu où je me trouve."
2 Charles Baudelaire, "The Life and Work of Eugène Delacroix", in *Selected Writings on Art and Literature* (London: Penguin Classics, 1972), 358-389.
3 See Wouter Davidts and Kim Paice, *The Fall of the Studio: Artists at Work* (Amsterdam: Valiz, 2009); Rachel Esner, Ann-Sophie Lehmann, and Sandra Kisters, *Hiding Making Showing Creation. The Studio from Turner to Tacita Dean* (Amsterdam: Amsterdam University Press, 2012).
4 Jens Hoffmann and Christina Kennedy, *The Studio* (Dublin: Dublin City Gallery Hugh Lane, 2007), 12-17.
5 Daniel Buren, "Fonction de l´Atelier", in *Les Écrits (1965-1990). Tome I: 1965-1976*, ed. Daniel Buren and Jean-Marc Poinsot (Bordeaux: CAPC Musée d´art contemporain de Bordeaux, 1991), 195-204.
6 Buren´s analysis of the traditional places of the art institutions include the museum, the exhibition, and the gallery (1977). They are all published in the collected writings of Buren: "Fonction du Musée" (1970), "Fonction de l´Exposition" (1973), "Qu´attendez-vous" (1977).
7 Daniel Buren, "The Function of the Studio", trans. Thomas Repensek, *October* 10 (1979): 51-59.
8 Buren clarifies in his text that when he writes about studios in the United States he refers to New York, and criticizes the artistic centrality generated there as a product of a supposed rivalry with Paris.
9 "Art USA Now" at the Musée d´art modern de la Ville de Paris in 1964, would be the first group exhibition of American artists to be shown in a French institution. While the first introduction to American art for many young French artists would be the exhibition "L´Art du Réel, USA 1948-1968" at the Grand Palais, in Paris in 1968. See Catherine Millet, *L´art contemporain en France* (Paris: Flammarion, D.L. 1987), 12.
10 French artist Jean Tinguely was the reference point in New York linking neo-dada and pop artists on both sides. See Serge Bérard, "Daniel Buren and Robert Smithson. A comparative study" (Ph.D. diss., University of British Columbia, Vancouver, 1999), 101.
11 Catherine Millet, *L´art contemporain en France* (Paris: Flammarion, D.L. 1987), 134.
12 Within the institutional art field, the term "post-studio" is commonly used, both in theoretical prose and criticism. However, it remains a challenge to determine precisely when and with whom it began. Although Robert Smithson (1938-1973) and Buren are often considered the pioneering figures of "post-studio" practice, neither of them has ever used the term, despite being prolific writers on the subject.
13 Works conceived for a precise place and that are particularly articulated with, because of, by or against, a precise environment. See: Daniel Buren, *À force de descendre dans la rue, L'art peut-il enfin y monter?* (Paris: Sens & Tonka, 1998), 79-80.
14 Javier Hernando, *Daniel Buren, La postpintura en el campo expandido* (Murcia: Cendeac, 2007), 12-13.
15 "Affichages sauvages recouvrant cinq panneaux publicitaires", Daniel Buren Official Website, Accessed July 15, 2020. https://danielburen.com/images/exhibit/35?ref=search&q=affichage
16 Rosalind Krauss, "Sculpture in the expanded field", *October* 8 (1979): 30-44.
17 Wouter Davidts, "'My Studio is the Place where I am (working)´ Daniel Buren", in Wouter Davidts and Kim Paice, *The Fall of the Studio: Artists at Work* (Amsterdam: Valiz, 2009), 69.
18 Pedro Alberto Cruz, *Daniel Buren* (Donostia: Editorial Nerea, 2013).
19 Marion Chanson, *L'atelier de Daniel Buren* (Paris: Thalia, 2007), 20.
20 Charles Baudelaire, *The Painter of Modern Life and other Essays*, trans. Jonathan Mayne (London and New York: Phaidon, 1965).
21 Daniel Buren, *Photo-souvenirs, 1965-1988* (Villeurbanne: Art Edition, 1988). Photo souvenir no. 2
22 Marion Chanson, *L'atelier de Daniel Buren* (Paris: Thalia, 2007), 16.
23 Gretchen Berg, "Andy Warhol: My True Story," *East Village Other*, 1966, in Kenneth Goldsmith (ed.), *I´ll Be Your Mirror: The Selected Andy Warhol Interviews. 1962-1987* (New York: Carroll & Graf, 2004), 90.
24 Daniel Buren, *Les Écrits (1965-1990). Tome I: 1965-1976*, ed. Daniel Buren and Jean-Marc Poinsot (Bordeaux: CAPC Musée d´art contemporain de Bordeaux, 1991), 244. Interview conducted in Naples, January 23rd 1972. Unpublished manuscript in French, published in Italian and English, in: Achille Bonito Oliva, *Dialoghi d'artista. Incontri con l'arte contemporanea 1970-1984* (Milan: Electa, 1984), 172-187.
25 Warhol had early connections with Paris. For example, Warhol´s first European exhibition was Paris in 1964 at Ileana Sonnabend´s Gallery; and he also had a second show at the same gallery the following year, where he announced his painting abandonment. Attendance broke records and Paris-Match and French Vogue planned photo-shoots of Warhol. North American poet-art critic John Ashbery, who lived in Paris at the time, said Warhol´s visit had lit "the biggest transatlantic fires since Oscar Wilde brought culture to Buffalo in the nineties". See Steven Watson, *The Factory Made. Warhol and the sixties* (New York: Pantheon, 2003), 206-208.
26 David Bourdon, *Warhol* (New York: Harry N. Abrams Incorporated, 1989), 179.
27 Andy Warhol and Pat Hackett, *POPism: The Warhol Sixties* (Orlando: Harcourt, 2006), 83.
28 Steven Watson, *The Factory Made. Warhol and the sixties* (New York: Pantheon, 2003), 121-127.
29 Caroline Jones, *Machine in the Studio: Constructing the Postwar American Artist* (Chicago: University Of Chicago Press, 1997), 198.
30 Iñaki Ábalos, *The Good Life: A guided visit to the houses of modernity* (Zurich: Park Books, 2007), 126-127.
31 Catherine Zuromskis, "Photographic Relations", in *The Factory: Photography and the Warhol Community*, ed. Alberto Anaut (Madrid: La Fábrica Editorial, 2012), 9-31.
32 Jones, *Machine in the Studio*, 263.
33 Andy Warhol, Kasper König, Pontus Hultén and Olle Granath (eds.), *Andy Warhol* (Stockholm: Moderna Museet, 1968).
34 Rainer Crone, *Andy Warhol* (New York: Praeger, 1970), 30.
35 He turned interviews into a creative form that supported and encouraged the ambiguity of his work conception. See: Kenneth Goldsmith (ed.), *I´ll Be Your Mirror: The Selected Andy Warhol Interviews. 1962-1987* (New York: Carroll & Graf, 2004).
36 Gretchen Berg, "Nothing to Lose, An Interview With Andy Warhol", in Michael O'pray, (ed.) *Andy Warhol Film Factory* (London: British Film Institute, 1989), 40.
37 Berg, "Nothing to Lose", 40.
38 Steven Watson, *Factory Made: Warhol and the Sixties* (New York: Pantheon Books, 2003), 152.
39 Andy Warhol and Pat Hackett, *POPism: The Warhol Sixties* (Orlando: Harcourt, 2006), 278.
40 Warhol, *POPism*, 279.
41 Buren also called the studio an "ivory tower" when he described its functions at the beginning of his text. See Daniel Buren, "The Function of the Studio", trans. Thomas Repensek, *October* 10 (1979): 51-59; Marion Chanson, *L'atelier de Daniel Buren* (Paris: Thalia, 2007), 9.
42 Andy Warhol, "What is Pop Art?" interview by Gene R. Swenson, *ARTnews*, November 1963, https://www.artnews.com/artnews/news/top-ten-artnews-stories-the-first-word-on-pop-183/

Image Captions
Fig.1: Planimetry elaborated by the author based on Daniel Buren's photographs and satellite images; "Affichages sauvages recouvrant cinq panneaux publicitaires", Daniel Buren Official Website, Accessed July 15, 2020. https://danielburen.com/images/exhibit/35?ref=search&q=affichage
Fig.2: Daniel Buren, *Photo-souvenirs, 1965-1988* (Villeurbanne: Art Edition, 1988). Photo souvenir no. 2; Daniel Buren, Photo-souvenir: Le Bureau de Daniel Buren, Paris, 1987. Photograph by Daniel Buren. © Daniel Buren.
Fig.3: Planimetry elaborated by the author based on photographs by Billy Name, Stephen Shore, and Nat Filkelstein, the sketch by Billy Linich in the book *The Factory Made*, *Warhol and the sixties* by Steven Watson on page 124, and satellite images; Andy Warhol at work on a large flower painting, New York, 1965. Photograph by David McCabe.
Fig.4: Various notes by the author on different photographs of The Silver Factory.
Fig.5: Extract from BMPT, Poster for Manifestation 3, 1967; Andy Warhol, Studio Portrait, 1966. Photograph by Schatzberg.

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Biography
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Narrative museum and spatial editing
Ralph Appelbaum's exhibition design experiences in Brazil

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Abstract

Discussions about museum architecture and exhibition design have been widely developed in recent decades, considering the broadening of the musealization phenomenon and the insertion of the museum in the cultural tourism industry. The "narrative museum" (Crespi 2020) is a concept able to approach museum architecture and communication technologies, creating new spaces with multimedia resources. This concept opens the opportunity of giving spatial significance to architecture through the synthesis established with multimedia technologies. The "spatial editing" is a concept transposed by the cinema universe which considers the multimedia narrative as a composition of controlled sequences, structured through different times and rhythms (Dzikean 2012). This concept, however, differs from the modern understanding of the museum architecture as a container for changing exhibition designs, contributing to the creation of a neutral envelope for a flexible interior space (Montaner 2003). It is true that the multimedia museum opens not only the possibility to bring new themes to the museum space, but also to include a great amount of digital content at the exhibit displays. However, the narrative museum often contributes to the plastering the exhibition design, which commonly face difficulties to incorporate new analytical perspectives to its original conception. In Brazil, this model was mainly incorporated through the worldwide known American exhibit designer Ralph Appelbaum, who had previous designed the Holocaust Memorial Museum and the Newseum, both in Washington. In Brazil, his main work is the Portuguese Language Museum, despite of other smaller contributions. This model reverberated in other exhibition design projects, often developed by Brazilian architects and designers, such as the Football Museum and the Museum of Tomorrow. This study will be based on the analyses of these main cases, contributing to the problematization of the proposed theoretical counterpart from the empirical analysis, investigating the relation between architects and designers in these cases.

Key words: Museum (architecture), Narrative Museum, Communication Technologies, Exhibition Design, Ralph Appelbaum.

1. Introduction.

The “narrative museum” seems a fundamental concept to understand contemporary experiences of exhibition design focused on the visitor´s experience. For this purpose, museum architecture emerges as an important element for the creation of impacting spatial narratives mediated by technological resources. The creation of these exhibition environments needs integrated collaboration between architect, curator, exhibition designer and scientific consultants – what is commonly called “integrative design” (Migliore 2020). New building materials, communication technologies, lighting design and interactivity become summary elements used for the creation of narrative spaces based on modular sequences.

The notion of “spatial editing”, which is a concept transposed from the world of cinema, demands strict control of the paths to be taken by the visitor, with the aim of enhancing the emotional effect of the experience. In this sense, the inclusion of interactive devices allows the visitors to deepen their knowledge in some contents of their interest, guaranteeing the personalization of the experience. The museal narrative must build a stimulating path of discovery. The designer acts like a film director, creating a kind of “interactive multimedia diorama”. This perspective gets closer to the concept of “multimedia museum” (Dzikean 2012). The museum space can be understood as a product of the integration between virtual and physical elements in space. The exhibition designers intend to create new kinds of relationships between space, collections, and people, incorporating the potential narrative qualities of the places to increase its possibilities of spatial significance. It becomes possible to involve diverse audiences in terms of age, personal preferences, and educational levels.

Digital technologies are fundamental elements of the exhibition design, given their adaptability to the construction of varied exhibition environments, focused on the exploration of multimedia resources, performance, and interactivity (Tallon and Walker 2008). This new thought of museum design emerges, by one hand, from the search for the expansion and democratization of access to knowledge. On the other hand, it is also related to the promotion of brands, recovering strategies commonly used at commercial spaces. For example, the BMW Museum, designed by Atelier Brückner (Munich, 2008), aims to guarantee the visitor´s engagement for remembering the brand by the fusion of architecture and communication technologies.

The American designer Ralph Appelbaum Associates (RAA) is a professional worldwide known for developing the narrative museum concept by the creation of impacting exhibition spaces, tourist attractions and educational environments. Appelbaum usually works together with a multidisciplinary team that includes architects, designers, sculptors, filmmakers, historians, educators, technologists, media specialists and researchers. These professionals are involved in creating “highly architectural processes” (Hall 2001). The RAA´s office opened in 1978, drawing on the experience gained by Appelbaum over the years working with the industrial designer Raymond Loewy, creator of the Coca-Cola bottle and the Greyhound bus. After that, RAA started to open new branches in London, Moscow, Berlin, Beijing, and Dubai. Both historical research and space architecture are factors that influence the exhibition design. According to Appelbaum:

> It all starts with a lot of research, collaboration of specialists, in short, search for information. What we do is turn that information into a narrative and then that narrative into an immersive experience. The museum's architecture and design are fundamental to provoke this experience. Contemporary museums, most of the time, are museums of interpretation, they need a context, an environment. They are more like a play, with the difference that you can walk around the stage (Appelbaum en Cavalcante 2020).

The RAA's exhibition language incorporates high doses of drama, darkened environments, theatrical lighting, and sound installations. Appelbaum defends the importance of bringing new communication gadgets into the exhibition space whereas contemporary museums “do not bring objects together, they bring people together” (Solomon 1999). The following excerpt explains important aspects of the firm's global approach:

> It is difficult to exaggerate the company's power in the world of international museum exhibitions. RAA has large state-of-the-art offices in New York, London, and Beijing, and is the first possibility for any museum with a sensitive topic to be developed and a large budget. RAA is a global brand that projects museographic designs focused mainly on issues related to trauma and human rights, and its aesthetics is deeply invested in the use of new technologies and interactive exhibitions (Wood 2013, 343).

The museum experience demands to “extend the language of domesticity” throughout the building (Solomon 1999). So, we can understand the widespread use of television monitors, touch screens and other common contemporary domestic devices. According to Appelbaum, “design and communication technologies make visitors feel like they are living in the past. It's like leaving the audience and going on stage, with the difference that the show is real” (Appelbaum en Cavalcante 2016). Therefore, this perspective is opposed to the modern conception of the “white cube” and also to the thinking of museum architecture as a flexible space, ordered by the conception of a free plan, where the visitors can freely self-determine their routes and what they want to see. However, it is important to sign that the highly scenic exhibition design might minimize the possibilities of understanding aesthetic and artistic values of the collections.

The narrative museum deals with a new challenge that is the dramatic quantitative expansion of museums in the last decades and “the lack of collections to fill them” (Saad 2007, 9). Appelbaum is used to work more often with social history museums than with art museums, less common in the USA[4]. So, RAA generally develops “interpretive museums, that is, museums that help people to understand human history. Didactically, theatricalization is important. These spaces require mediation between the exposed objects and the visitors” (Appelbaum en Cypriano 2001). Even when designing exhibition displays for material collections, Appelbaum says that “objects need to be contextualized. Museums can be about bigger things than just objects in sight. People want stories” (Appelbaum en Solomon 1999). The exhibition space approaches to the cinema experience, intending to cause strong emotions by controlling the public's sensations. Appelbaum even explores the possibility of converting everyday objects into collections, which can be used not only to tell stories of strong moral gravity, as the Holocaust Memorial (1993), but also for creating light environments that mix everyday life and technology, as the Newseum (1997).

Immersion, dramatization, and historical heritage become the signature of RAA's interventions, including lots of exhibitions focused on traumatic events. Some authors point to the “ethical discussion” about the dangers of a single American office monopolizing the construction of traumatic narratives around the world, especially when they evoke “cultural fantasies” that crystallize the construction of the museal fiction. Another problematic aspect is the potential of a museal discourse conceived in these conditions to stifle critical thinking, tending to present unilateral and persuasive versions of the themes addressed by the museums (McKee 2002). Wood (2013) also indicates the need to reflect on what was not shown by touch screens or light shows.

In spite of the critical aspects mentioned, the narrative museum was a concept widely applied to the Brazilian exhibition space mainly through the hiring of RAA by Rede Globo, the largest media conglomerate in the country, and Roberto Marinho Foundation (FRM), a private non-profit institution linked to Grupo Globo. In Brazil, Appelbaum´s main work is the Portuguese Language Museum (MLP) (São Paulo, 2006), despite of other smaller, but not less important contributions. This model reverberated in other exhibition design experiences, often developed by Brazilian architects and designers, such as the Football Museum (São Paulo, 2008) and the Museum of Tomorrow (Rio de Janeiro, 2015). So, the first part of this article aims to situate the concepts of narrative museum and spatial editing, including the main Appelbaum´s experiences that called the FRM´s attention: Holocaust Memorial and Newseum. After that, we will analyze the main Brazilian experiences associated with this design approach, investigating the relation established between architectural space and communication technologies.

2. Narrative museums in the United States and Ralph Appelbaum

American art and science museums coexist with thousands of learning centres, visitation, and corporate displays. The American exhibition design is originated from the experiences of Universal Exhibitions, commonly developed to sell nation and corporate products. For example, we can remember the work of James Gardner, a British army officer who was also dedicated to the exhibition design. His first exhibition, “Britain can make it”, at the Victoria and Albert Museum (London, 1946), was created to “lift the spirits of a war-damaged nation” (Hall, 2001). Even though, his most popular project was the Evolution Technological Museum (Eindhoven 1966), an interactive Science Centre financed by Philips. In the United States, the projects of Charles and Ray Eames for the creation of exhibitions commissioned by IBM in the 1960s became famous. Since the 1970s, Edwin Schlossberg has been creating interactive environments that dialogue with the scope of his own company, the Sony Wonder Technology Lab (1993). In general, companies focused on electronics sectors have commonly promoted the creation of interactive exhibitions, with the aim of showing and selling their products.

The entrance of commercially trained designers at the museums was quite conflicting because of the different perspectives evoked by designers and curators. However, the boundaries between educational goals and selling products seems fragile due to the overlaps of historical facts and amusement parks. For example, we can see the Kalamazzo Air Zoo and Science Museums (Michigan, 2003). The exhibition, designed by the American office DMCD, includes a “solo coaster for visitors to fly around the collection of warplanes and a simulated World War II bombing run over

Germany, where they have a 50% chance of being shot down" (Hall, 2001). Another DMCD´s project is the Science Centre located at the base of Petronas Twin Towers (Kuala Lumpur, Malaysia), which aims to educate visitors about oil drilling "through dioramas, games and a simulated helicopter ride to a replica oil rig" (Hall 2001). In both cases, the "education" is directly associated with the spread of the expansionist American nationalism or the sale of products.
In this context, we can consider most of the Appelbaum´s interventions for the creation of civic memorials, commercial spaces, and science museums[2]. The Rose Center for Earth and Space (New York, 2000) has become a famous intervention due to the great opening show inside the spherical planetarium at the beginning of the museum path. During the spectacle, the visitor is welcomed by the voice of Tom Hanks, a well-known Hollywood star. According to the designer, the visitor's entrance is the most important moment for guaranteeing his engagement to the museum narrative, as it happens in cinema. For this reason, the beginning of the museum experience should present an introductory film or show. Another important issue is the flow inside museums, which must "keep people moving, without losing attention" (Hall, 2001). Given the emotional density of the narratives proposed, often the visit ends in an open space, creating a relaxing moment for the visitor.

2.1. The United States Holocaust Memorial Museum
The Holocaust Museum is a turning point in Appelbaum's career that contributed to make the office worldwide known. The Memorial should remember a tragic European genocide incorporating the American view of the event to ensure that this tragedy will never happen again. The Museum narrative was based "on the preamble of the United States Constitution" (Vandecarr 2012). Interpreting this sensitive topic is "further complicated when the event occurred in another country, in another time, and with no structures to preserve at the location where the event is being depicted" (Venno 2005). The large number of museums and memorials dedicated to the Holocaust in the United States shows a growing phenomenon of the late twentieth century: the tourist interest in death, disaster and atrocity, also called "fatal attractions" (Rojek en Lennon & Foley 2000, 3).

The building, designed by the architect James Ingo Freed, includes areas for main and temporary exhibitions, memory spaces, library, archives, learning centre, classrooms and computer access points. The architecture is a main factor to enhance the visitor's emotional connection to the museum, so that "[the building] provides far more than a neutral background for the tale that must be told. The building calls for interpretation but confounds analyses. Its monumental forms appear to be shaped not by architecture but by history" (Muschamp en Venno 2005, 33). The museum narrative is structured as a theatre play in three acts: Hall of Witness, Hall of Learning and Hall of Remembrance. The three floors are integrated by the Tower of Faces, a vertical element that displays photos of Nazism´ victims (Fig. 1).


Fig. 1

The architectural design intends to raise immersion by using materials and dim lighting to evoke the feeling of being in a concentration camp. The building's language presents harsh forms that interpret "images of confinement, observation, atrocity and denial" (Muschamp en Venno 2005, 40). Suggesting the disorientation experienced by the victims of Nazism, the Museum's internal route do not present clear paths and there are few stopping options, what causes physical and emotional discomfort. The museum experience begins with the delivery of an identification card to visitors, which describes what happened to the victimized people. The visit starts inside an elevator with a sound installation (Dernie 2006, 192). Then, the door opens, signing the beginning of a controlled path that must be progressively followed. Alison Landsberg affirms that:

> The visitor is at the mercy of the museum and must submit oneself to its pace and its logic. There is no way out short of going through the entire exhibit […] The architecture and exhibition design conspire to force each visitor to confront images and objects that might, in other museums, be wilfully ignored (Landsberg en Venno 2005, 47-48).

The relationship between material collection[3] and architecture creates a powerful experience which does not depend on the self determination of the visitor. The rout is ended by the presence of computer terminals. The museum also shows movies about the Holocaust and interviews with survivors. Lastly, the Hall of Remembrance is the last space presented, trying to encourage reflection.

The creation of the Holocaust Museum was permeated by disputes. Shaike Winberg, the founder director, said that "the design was not going to lead the exhibition" (Farr en McKee 2002). According to the author, Appelbaum would have felt prejudiced because the architectural design started before the exhibition one. Freed "wanted his building to be the memorial, which it is, and he didn't want an exhibition to confuse him" (Farr en McKee 2002). Despite the quarrel, the Museum seems to have achieved the goal of personalizing the Holocaust experience so that the visitor takes on the role of a person victimized by Nazism. As Appelbaum explains:

> Of course, it is impossible to convey the experience of a prisoner in a concentration camp. But we can bring the visitor closer to everything that happened. We travelled to Auschwitz with the challenge of transporting this experience in time and space, bringing evidence of what happened. Photographs, prisoners' shoes, and the museum's physical environment help with this immersion (Cavalcante 2016).

For some authors, the Holocaust Museum can be considered a "powerful instrument to encourage empathy and reflection" (Venno 2005). However, others highlight "the reckless overlap of devices that stimulate emotions under the banner of empathy" (Migliore 2000). Scrolling through the exhibition may become a terrifying experience. Although Appelbaum says to be concerned with the need to establish a balance point, allowing "people to look into the face of evil without a conscience so strong that it would incapacitate them from absorbing a survey of evidence" (Appelbaum en Dernie 2006, 29); Elisa Colepicolo points out that "it is common to find people crying on the way out" (Colepicolo n.d.).

Despite the position adopted by the Museum's website, which is clearly against the genocide (United States Holocaust Memorial Museum n.d.), this kind of exhibit approach may transmit some excitement in experiencing the "emotions" of the Holocaust. The visitor obviously knows that he is not in danger inside a museum. In this sense, the visitor is elevated to a position of "semi-God", as if exercising a certain vigilance over the victims (Wood 2013), what can damage the critical approach necessary to deal with the related problem.

2.2. Newseum
The second analysed case is the Newseum, created by the Freedom Forum, an American Foundation composed of media conglomerates that works for press freedom. The Newseum was thought to create a "totally interactive place that, when addressing the subject of individual freedom, would lead the visitor to be 'contaminated' by journalism" (Tessler 2019). The initiative was conceived as a reaction to the discredit of journalism in the USA[2], seeking to make the public aware of the responsibilities of journalistic work. The museum's speech is based on the United States Constitution, showing forty-five words from the "First Amendment" on its façade.

Designed by the architect James Stewart Polshek, the Newseum is located at a prime area of Washington, between the White House and the Capitol. This strategic location creates a symbolic narrative that visually connects the ideals of "free press" and "democratic government". The façade presents a large television screen (Fig. 2). The architectural program includes a big television studio, theater, food court, restaurants, shops, administrative offices, and classrooms. The Newseum can be considered almost a hybrid between museum, shopping mall, and recording studio (Pagano 1997).

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Fig. 2

The collection displayed at the Newseum included news, prints, photographs, and other objects related to the news memory. In addition, there was an extensive audiovisual collection with videos, interactive stations, high-definition theaters, and galleries. The museum narrative intends to answer five fundamental questions about the journalism world: “who, what, where, when, and why” (Holden 1998). Spatially, it is divided into the following areas: Berlin Wall, Pulitzer Prize Winners Gallery, News History Gallery, News Wall, and interactive displays at the end. According to the author, “the Newseum is a mix of the collective experience of Americans” (Holden 1998).

Inside, the visitor can see movie clips, historical episodes from television, radio broadcasts and print newspapers. There are some interactive games, in which the visitors can play the role of an editor-in-chief, preside a meeting with editors of the newspaper's newsroom, assume the role of a television anchor, make weather reports and read news from a teleprompter. It also includes the Journalists Memorial, in honor to professionals killed “in the line of duty” (Holden 1998). In Appelbaum's opinion, the Newseum was a challenging project because of the technological difficulty of updating content at the exhibit displays in real time.

According to Ouroussof (2008), the museum's architecture encourages speeding up the flow of crowds, not inciting the patient analysis of the information exposed. For him, "if the building reveals something about the state of journalism today, it conveys the sector's anxieties about the diminishing attention span of the average American" (Ourossof 2008). The architecture design is excessively literal when evoking the shape of a television. The effect obtained is surprising, but it alludes to the nationalism as a foreign policy in an aggressive manner. As we know, the Newseum was closed in 2019, due to a conjuncture of factors, including the loss of interest from investors and the high price of land in its privileged region. When closed, the Newseum faced serious problems with the data updating of exhibits.

3. Appelbaum in Brazil: some experiences

The narrative museum is also associated to the so-called “edutainment boom”, developed by a new generation of “exhibition designers, visionaries and pragmatists, with technology intelligence and theatrical mentality specialized in bringing objects, ideas and even corporate philosophies to life. His eminence on this theme is Ralph Appelbaum” (Hall 2001). The approach to the “edutainment” – or “educatainment”, in its Brazilian version – can be considered one of the reasons why Rede Globo/ FRM became interested in Appelbaum (Finguerut & Sukman 2008, 256). This book also signaled the FRM´s interest at the Holocaust Museum and the Newseum. Both cases proposed the creation of persuasive narratives by using a wide variety of sensory and material resources. The Holocaust Museum was the most known Appelbaum´s project. In its turn, the Newseum proposed the potential relation between museums and media conglomerates, which may have interested Rede Globo, looking for internationalization.

Appelbaum's introduction in Brazil was related to the FRM´s initiatives to create “educational museums” and to promote a new “typology of museums brought to Brazil by FRM, so that the inaugural case was the Portuguese Language Museum. They are museums that focus on narrative and creating experiences” (Graça 2019). At that time, however, RAA was already an old partner of Rede Globo, having also collaborated with the projects of the Memorial of Rio Grande do Sul and the exhibition “50 years of TV and +” (Fig. 3).



Fig. 3

In the first case, it was a discreet intervention in a historic building that created a great Timeline and proposed displays around the building structure (Filho 2010). The second case was a larger project held at the Oca´s building in Ibirapuera´s Park, which intended to create an exhibition-show entirely composed by virtual collections (Tognoni 2000). The exhibition brought full-size images depicting important personalities of Brazilian television, which were projected on the building's supporting pillars. Television documentaries could be seen on big screens. The Oca´s dome received a multimedia projection that could be watched from reclining chairs with individual speakers.

3.1. The Portuguese Language Museum

The MLP was an intervention at the historical building of the Luz Station designed by the architects Pedro and Paulo Mendes da Rocha. The museum's creator, Antônio Risério, asked Appelbaum to propose “an amusement park of language” (Cohn 2009) that should resemble to the Rose Center for Earth and Space. So, Appelbaum faced the project as a “Brazilian Portuguese Linguatarium” (Cohn 2009). The integrative design perspective seems to have been achieved by this project. According to the architect´s following report:

> The exhibition design suggested that the route should start with an auditorium, in which there would be a kind of “introductory class” on the subject, which would function as the prologue of a book. The idea was to ensure that visitors had a minimum content base to follow the rout. Then, the “Language Square” was conceived as a planetarium. It is the heart of the Museum. It is a space to listen from the greatest poets, the greatest writers of the Portuguese language, to orality. It is a museum of the spoken language, not of the learned norm. All who attend are experts on the subject. [...] On the lower floor, the section “Crosswords” would use the building structure as a metaphor of the language´s pillars, showing the influences suffered by the Portuguese language. The “Timeline” presented the idea of exhibiting the three main matrices that formed the language (Rocha 2015).

As we can see, the strategies developed by Appelbaum in so many other previous experiences were applied to the MLP: the ascent by an elevator accompanied by a sound installation, the creation of a vertical circulation axis integrating the building's floors, the exhibition of a film as a strategy to guarantee the visitor´s engagement, the creation of a multimedia spectacle at the Language Plaza (Fig. 4), the proposition of a Timeline, the distribution of exhibitors around the building structure, the use of interactive gadgets. The architectural program, despite being considered too invasive concerning to the heritage preservation (Kühl 2008), included the presence of image editing rooms, such as the Newseum.



Fig. 4

The MLP was a quite impressive intervention, both for the aesthetic quality of the spaces and the possibility of seeing “everything working perfectly, as it does not happen in most Brazilian museums” (Taddei s.d.). Based on Appelbaum´s model, it became possible to insert voices of Brazilian personalities into the narrative, including actors from Rede Globo and anonymous people. This solution was also adopted at the New York Rose Center. As a result, viewers were often distracted by familiar voices of television famous artists (Braga 2019, 112).

On the other hand, several authors address that the MLP´s narrative contributes to erasing social conflicts. According to Sobrinho (2011), Pfeiffer (2013), Pereira (2019) and Santos (2019), the museum narrative considers the Portuguese language as an element of national unity and do not properly exhibit the role assumed by indigenous languages, African languages and immigration languages practiced in Brazil. Referring to the MLP, Wood affirms that “some of the great new museum exhibition projects of the RAA seem to demonstrate a desire to close certain difficult and painful areas of memory in favor of nationalistic celebratory agendas” (Wood 2013, 343).

3.2. The Football Museum

At the beginning of the century, RAA agreed with the government of Rio de Janeiro to design a Football Museum in Maracanã. For this purpose, he visited the city in 2000 (O Globo 2000). However, this proposal was abandoned due to the high costs involved (Rangel 2002). After that, FRM continued to develop this project, which was finally implanted under the grandstands of the Pacaembu Stadium in São Paulo, designed by Daniela Thomas and Felipe Tassara. The museum creation seems to have developed the notion of integrative design. According to Tassara, “there was no predominance of curatorship, architecture or scenography. Everything was designed together. The multidisciplinary meeting was very enriching” (Tassara 2018).

The museum circulation is predefined and based on the idea of spatial editing. The Great Entrance Hall remembers the Tower of Faces. In its turn, the Exaltation Room is an audiovisual show. The final section incorporates interactive games. However, the director of the Football Museum, Daniela Alfonsi, admits that “the exhibition´s narrative softens conflicts and contradictions about the Brazilian football” (Azevedo e Alfonsi 2010, 282). Despite the institution's committed efforts to promote other debates about football practices in Brazil (including, for example, women's and lowland football), the exhibition design makes the creation of new speeches difficult. The only big update in the main exhibition took place in 2015.

3.3. The Museum of Tomorrow

The most recent collaboration of Appelbaum in Brazil was the concept for the Museum of Tomorrow, which architecture was designed by Santiago Calatrava. In this case, the perspective of integrative design did not occur at all, and the contact between designer and architect was limited to a meeting at the beginning of the project (Malicheski 2019). As Calatrava pointed out, “they already knew what they wanted. […] I just supplemented the content with a building” (Calatrava en Martín 2015). Appelbaum proposed that the museum narrative should present five questions, just like the Newseum: Where did we come from? Who we are? Where are we? Where are we going? How do we want to go? (Fig. 5).

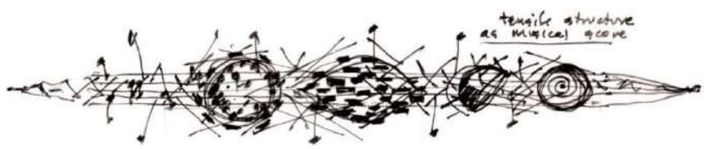


Fig. 5

In fact, several elements already used at other previous projects were incorporated into the Museum of Tomorrow: the delivery of a card to the visitor at the entrance, the beginning of the experience with the multimedia spectacle “Cosmos”, the “Anthropocene” show, the interactive games and the open ending space overlooking the Guanabara Bay. However, the museum narrative did not match the architectural project. Calatrava had originally designed the beginning´s path with the view of the Bay, but the exhibition design wanted this place to end the journey. It was decided to invert the circulation scheme initially planned for the building. As we know, this decision caused several problems of internal circulation.

The high fees charged by Appelbaum[5] led the project to the Brazilian office Artífício Arquitetura e Expografia. According to the architect Vasco Caldeira, “there was no conversation, they [RAA] handed over the notebook and left. We had technical challenges for the development of the project proposed by Appelbaum, and so we needed to change the original concept” (Caldeira 2018). As a result, the original idea was not implemented, and that is why this project is not available at RAA´s website.

4. Final considerations

The Brazilian experiences of narrative museums analyzed are originated by the application of a worldwide know model in some cultural initiatives developed by Rede Globo/FRM, that got interested to the edutainment perspective and to the creation of audiovisual collections. At the time of MLP's opening, however, Brazilian people in general and even Brazilian architects did not know much about Ralph Appelbaum, except that he was a foreign designer that explored the use of new technologies.

Although his solutions seemed innovative, they had already been widely applied in other international cases. Maybe the novelty factor and the high-quality of Appelbaum's interventions have contributed to the large audiences to these exhibitions, including people who had never visited a museum before. The “RAA´s model” quickly spread in the Brazilian context with the creation of new technological exhibition spaces developed by the integrative design perspective, such as other FRM´s experiences: Paço do Frevo (Recife, 2014) and the Museum of Image and Sound (Rio de Janeiro, not completed).

The multimedia museum brought great expectations about new possibilities of choice and self-determination at the museum space. However, some of the proposed approaches contributed to the crystallization of hegemonic views aligned with specific sectorial interests, capable of articulating “sensitive topics” to “big budgets". The discourses including “interactivity” and “learning” allude to a universe of values associated with a wish of freedom inside the museum space.

By the analyzed examples, we can point out that the integrative design effectively contributed to better results for the exhibition spaces. On the other hand, when the multimedia museum is articulated with rigids circulation schemes, emotional controlling designs and enormous exhibit devices – which are difficult to rearrange – it becomes hard to update and even to change the original narratives. The only case in which a free-plan architecture was proposed, the Museum of Tomorrow, was completely modified by the exhibition design that tried to control the visitor´s route. In addition, the “highly architectural” exhibition may help to the plastering of some specific narratives. According to Hugo Sukman, curator of the Museum of Image and Sound, in these museums, “the examples can change, but the narrative remains the same” (Sukman en Menezes 2011, 76). As we can see, both narrative museum and spatial editing can become a great problem for the contemporary musealization processes, especially considering a de-colonial perspective.

Notes

1 According to Appelbaum only 15% of American museums are art museums (Cypriano 2001).
2 Some civic memorials designed by Appelbaum: National Constitution Center (Pennsylvania, 2003), National World War Museum (Missouri, 2006), Culloden Battlefield Memorial Visitor Center (Scotland, 2007), United States Capitol Visitor Center (Washington, 2008), Jewish Museum and Tolerance Center (Russia, 2012), National Veterans Memorial and Museum (Ohio, 2018) and National Museum of African American History and Culture (Washington, 2016). Some commercial projects: Volkswagen´s Autostadt (Germany, 2006), The Ford Foundation (New York, 2011) and IBM 100: think (New York, 2011). Some science museums : the Fossil Halls and Hall of Biodiversity - American Museum of Natural History (New York, 1996-98); National Museum of Prehistory (Taiwan, 2002) and the Rose Center for Earth and Space (New York, 2000) (Ralph Appelbaum Associates 2020).
3 For the construction of the museum, an extensive campaign asked for the donation of collections – including documents, letters, toys, diaries, clothes and photographs – which came to collect 10,000 items related to the memory of the Holocaust. Some objects were brought from Auschwitz, such as uniforms worn by soldiers, bunks, Treblinka train tracks, a section of Auschwitz´ quarrel, a Danish rescue boat and a wagon used to transport victims to concentration camps. In a room, there is a disorderly accumulation of shoes collected from the victims. There is also a replica of a gas chamber inside the Museum.
4 As a Freedom Forum´s survey indicated, only 31% of Americans interviewed said they believe in reporters and 45% in television anchors.
5 Appelbaum is known for charging 25% of construction costs on his projects (McKee 2002).

Image Captions

Fig. 1. The Holocaust Museum. Tower of Faces. (Ralph Appelbaum Associates 2020).
Fig. 2. The Newsem. External façade. (Ralph Appelbaum Associates 2020).
Fig. 3. 50 years of TV and more. (SEGD 2020).
Fig. 4. Language Plaza. Portuguese Language Museum. (Ralph Appelbaum Associates 2020).
Fig. 5. Sketch for the Museum of Tomorrow. (Museu do Amanhã 2020).

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Abandoned places transformed into Art venues.
Two Cases: MoMA-PS1 (New York, US, 1976), and MACAO (Milan, IT, 2012)

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Abstract

This paper brings into discussion the movement of alternative art spaces. Although circumscribe retrofit, buildings re-conversion, it also relates to gentrification. The trend of recycling abandoned buildings into artsy venues is observed, here, from the 1970s in New York, US.

A noticeable case is the former 13-year abandoned building of the Public School nº 1 - PS1, launched as the PS1 Institute for Contemporary Art, with the Installation and site-specific artworks, named Rooms, in 1976. In 2010, after renovations, PS1 merged with MoMA, since when is named MoMA-PS1.

As a comparison, another case comes from Milan, Italy. That is about the MACAO, an art collective heading a contemporary experimental arts center. Nowadays, the group is settled in the former building for livestock auctions, in the complex of the old Municipal Market, to the city east area. Recently, the place was housing for artistic production, exhibition, and other cultural activities.

Abandoned places can create new relations and dynamics in the city, while is also potential objects for urban transformations. New meanings, purposes, uses, and functions within abandoned architecture seem to contribute to its urban reincorporation and rehabilitation of those places. Art activisms seek a contemporary positioning with a look at the context in which it develops and in which it wants to involve. This subject reflects and can contribute to a debate that seeks alternatives to the use and preservation of urban voids and their inherent link to gentrification and capitalism accumulation in contemporary cities. So, it extends our social-historical and architectural memories.

After all, as would say the artist Paul Klee: “Art does not reproduce the visible; it makes it visible”. (2007, p.35).

Keywords: urban void, abandoned architecture, gentrification, alternative art spaces.

1. Introduction

Abandonment generates waste.
(Kevin Lynch)

Here, to start a dialogue about the issue of abandonment in architecture and urban voids, this text searches for some common understandings on topics that look forward to guiding the readers within the point of view here presented.

Post-industrial cities have seen an increase of derelict urban spaces, built-up structures, and buildings became obsolete due to their original functions turned into either unimportant or lost. While new constructions arise to fill the demands and trends of a contemporary city, the urban sprawl contributes to growing those urban and architectural voids in the city. According to Ignasi de Solà-Morales (1995, p. 120), *these strange urban spaces* are spaces of freedom - an alternative to the late capitalist city.

As a consequence, those previously abandoned buildings - then located not in the central city, nor even in the most wanted areas - become shelters interesting for artists. Soon, after quite a few renovations and some new activities in that buildings, now occupied with art exhibitions, site-specific artworks, musical parties, and other programmings, using (or re-using), the architecture of their previously abandoned empty buildings is transformed.

Resounding within the urban voids that circumscribed them, it is considered very necessary to talk about gentrification; and how it makes the claiming from the streets an obligation for the critical view of contemporary cities, an even stronger argument now. That is an important start point of what it follows.

Here, focusing on two cases: PS1 / MoMA-PS1 (New York, 1976 / 2010) and MACAO (Milan, IT, 2012), this paper talks about them, considering architecture re-conversions in former empty buildings used by artists as a venue for encountering trends and new protocols for the contemporary society.

1.1. Gentrification

Gentry also means low-level nobles.
Gentrification, thus, relates to the changes of a popular neighborhood into a more bourgeois area.

The author David Harvey, *a* ***reader*** *of Karl Marx, as well as Friedrich Engels and Henri Lefebvre*, is an important reference here. Not only because elucidates the issue, but also for his great understanding of the theories and practices that engender and gentrify contemporary cities.

From the 1970s, the suburbanization with new projects as a way to grow capitalism – putting the surplus label and surplus capital to work together (Harvey, 2014) – helped to expel the working class from the city centers. In that context, the hectic moment of an undesirable Vietnam War, and all the social revolutions, mainly from and for the black, women and what called *minorities*. The claiming from the streets was a high voice. But, on the other side, higher forceful powers began to control *the right of the city* (Lefebvre, 1970; 1996).

Henri Lefebvre’s argument was as path-breaking as it was prescient. According to him, the imperative role of urbanism in general, and production of urban space in particular, is in capitalist relations, and its reproductions. The author went further and argued that capitalism survived in the 20th century, not by simply organizing production *in* space but by orchestrating the production *of* space (Lefebvre, 1970, 1996), which underscores his call, at the end of the 1960s, for a struggle over shaping the very processes that produce capitalist urbanism, which denies the right to the city to most of its inhabitants.

The right to the city, in Lefebvre’s framework, does not only imply a right to urban space but also envisions a city where its inhabitants could properly participate in urban political life. This emphasis on the city as a space of politics and an arena of full political participation is most visible in the specific way Lefebvre frames the right to the city. It manifests itself as a superior form of rights: the right to freedom, to individualization in socialization, to habitat, and to inhabit. The right to the oeuvre, participation, and appropriation (clearly distinct from the property right) is implied in the right to the city. (Lefebvre, 1996, p. 173-174).

Expelling the working class from the center of the city, creating new boulevards for the bourgeois, is part of the strategy of capital accumulation, actually seizing hold of the city as meaning to resolve its problems of growth, making room for more profits with urbanization. In the USA, building new cities and expanding constructed urban areas had put capital and work class together, mainly after the big depression and Wars. Creating highways for metropolitan areas, big cities like Dallas or Los Angeles were not any longer those original small places from the 1940s.

Capitalism was doing well during the 1950s and 1960s, but a large number of the population was not doing well, at all. That involved a great deal of discontent of the population. As to mention, 120 USA cities were up to political struggles, on the occasion of Martin Luther King's assassin. One perceptive answer to calm down the society's nerves, was to give them credit as money. Soon, the urban rental market appeared as attractive to the economy as for those who can afford to pay.

1.2. Urbanization as Gentrification

Re-urbanization has demonstrated a way for capital to produce profits. Nowadays, the urban rental market is very active, in many cities around the world. And as a consequence, if a citizen has not its economic ways to pay and support their living in their place of living, they are forced to go somewhere else. Higher costs of living in gentrified areas feed the profits of renting properties and investing in buildings that are not occupied by their proper owners, but with renters. Here, it could be explained a reason some local people, mainly the poorer inhabitants there before, is expelled.

In this situation, ***Harvey*** (2014) questions whether there will be an urban alternative to the conditions that affect the ideals of urban identity, citizenship, and belonging, to a coherent policy. These ideas of identity, threatened by the malaise of individualistic neoliberal ethics, become much more difficult to maintain. (p. 49) Being clearer, in his words:

'*The question of the type of city we want cannot be separated from the issue of the type of people we want to be, what types of social relationships we seek, that relationships with nature satisfy us the most, what lifestyle we want to lead, what are our aesthetic values. The right to the city is therefore much more than a right of individual or group access to the resources that the city incorporates: it is a right to change and reinvent our deepest desires. Moreover, it is a more collective right than an individual, one that reinterprets the city inevitably depends on the exercise of a collective power over the urbanization process*.' (***Harvey***, 2014. p. 28)

1.3. Facing it

The Italian author Giovanni Semi, in his book *Gentrification. Tutte le città come Disneyland?* or *Gentrification. All cities like Disneyland?* (Italy, ed. Mulino, 2015), looks for answering questions such as: Is gentrification a positive or negative phenomenon, and from which point of view? Also: Must gentrification be fought? Can it be triggered and/or controlled by appropriate urban policy choices? What is the public role in supporting or arguing it?

Despite it looks non-answers, Semi brings the view of degraded central areas in contemporary cities as desirable places. Although he observes they catalyze certain authenticity and seems to be perceived in the collective imagination as something with a new and more dynamic image, the author wants to reinforce the needs of consumers of the bourgeoisie. Also, defends the need for changes and transformations, in the way it goes better for capital profits. He says that urban changes have been happening in many cities, as marks San Francisco as a previously important center for the left political thinking people, the black panthers as well as for the funk music. And now, local where tech millionaires from Silicon Valley are settling residence.

A similar situation happens in New York City, where new riches are gradually occupying the Brooklyn neighborhoods, as Bed-Stuy, Clinton Hill, Fort-Greene, and Williamsburg. On the other hand, there is a relevant part of society, not miserable nor downsizing, looking for a simpler way of life. They are aware of gentrification processes and would not like to move away from where they like to live. Frequently where they were born and raised, as well as for the neighborhood inhabitants, and its relations.

One should not consider piling the cities only with real-estate speculators for anxious oligarchs to park their money, concentrating an immense wealth in a tiny minority. Otherwise, we may also have, among other things, an artistic and cultural hyper-gentrification, a cleaned-up underground scenery. An outcoming question: Is it an interesting fact for a social environment city?

Friedrich Engels said about the poorest and their social expulsion when noted that '*filthy alleys disappear, for the great joy of the bourgeoisie, that self-congratulates for contributing to the huge success of transformations, but everything reappears immediately elsewhere*.' Engels emphasizes that the poorest '*are simply transferred to another place! The same economic need that produced them at previous times, returns to produce them elsewhere*.' (Engels, 1935, in Harvey, 2014, p. 51)

Thus, gentrification is not any longer a new issue. It is part of urban changes, observed from a series of changes, struggles, resistance, fights, and all sort of those *slogans of protest* (Agier, 2011, p. 172): a substantial space for reflection.

2. Abandoned places, or these strange urban spaces

Under the meaning of ***Solà-Morales*** (2002), these places manifest and present themselves as spaces of freedom, an alternative for the cities of late capitalism.

The author will say that '*these strange urban spaces'* have '*their edges lacking an effective incorporation'* and thus '*are out of urban dynamics*.' In his words, they are '*un-inhabited, in-safe, im-productive areas, foreign places to the urban system, mental exteriors in the physical interior of the city that appear as a counter-image of the city, both in the sense of its criticism and in the sense of its possible alternative.'* (Solà-Morales, 2002, p.120) Seemingly forgotten places, where the memory of the past seems to prevail over that of the present; therefore, become obsolete and outside the effective, and affective, city circuits.

The identification that is with the place does not result from its functions, but from the appropriation of these places by a group of people who can decide what to do with that space, giving it new meanings and attributes.

We can observe that urban transformations, growing in the history of cities, have left many built structures in a state of abandonment. Today, the information society sees constructions of the industrial society of yesteryear. Thus, the city of the past leaves us a cultural heritage on which alternatives to the preservation and memory of these places must be projected.

Breaks between the historic city and the modern city generate an anti-historical sense to the new city core and a historical character only to the ancient core. While the modern city grows without qualitative concerns, the historic city becomes closed, stagnant. ***The Italian architect Aldo Rossi*** (1966) noted that *urban facts are artistic facts* because they are both products of humanity. The author elucidates:

'*How are urban facts relate to works of art? All the great manifestations of social life have in common with the work of art the fact of being born from unconscious life, this level is collective in the first case and, individual in the second, but the difference is secondary because some are produced by the public, the others for the public, but it is precisely the public that provides them with a common denominator*.' (Rossi, 1966, p. 19).

Another relevant study that addresses abandoned places is presented by ***Stephen Cairns and Jane Jacobs, authors*** of *Buildings Must Die* (2014). The authors recall that buildings are '*assigned objects of superior qualities of humanity*.' And in this way, many architects, '*from John Ruskin to Aldo Rossi and Charles Moore, have believed in architecture's ability to hold and disseminate 'memory'.'* (p. 11)

'Sensitivity to a building's end and an understanding of the conditions that attach to such an end — wasting, obsolescence, decay, decrepitude, ruination — is less developed in architecture.' (Cairns and Jacobs, 2014, p.15). Therefore, they observe that 'the positive and negative states of architecture are carried out by two interrelated conditions" (p.31), namely: matter and importance.

Cairns & Jacobs observes that a building's durability depends upon a series of post-construction actions that will offset or incorporate such facts. This might include maintenance regimes that ensure things hold together as they were intended to, or it might entail symbolic or aesthetic work that reclaims a disorderly building as a picturesque ruin, and there are other possibilities. (p.32).

Negative aspects of abandonment create possibilities for architecture to better live with the malformed and deforming facts of its existence. Thus, they reflect on the decline and destruction of buildings not as a death sentence for architecture, but rather a path to new reflections on being in the world.

3. The alternative art spaces movement. New York City, 1970´s

It is possible to observe that one of the trends to occupy abandoned places, architectural voids in the city, comes from the 1960s and the 1970s in New York, USA. The city has had seen an uprising of social movements, especially influenced by the counterculture context. Due to a few and expressive urban policy changes circumscribed in a certain economic crisis, a growing number of abandoned places in New York City called attention, in particular to artists and art-related professionals.

Against the standard *white cube* in the modern art system (O´Doherty, 1995), artists started to consider the city, and its problems, as a substantial part of the art thinking. Thus, new artworks such as site-specific installations and interventions, happenings and performances, also looked for derelict urban spaces and buildings in the city as ideal places for those new forms and ways of producing art. Soon, a relevant movement for alternative art spaces began.

Among the North American cultural scene, besides the series of socio-political-economic movements, new artistic aspects emerged, as Conceptual Art. At that time, many artists in New York City began to act, through their ideas, postures, actions, works, and interventions, increasingly against institutions and the installed power, especially in the ideological assumption of museums, and their modern art system agents.

Artists sought new forms and ways for the project and carrying out their work - whether through criticism, either through their interventions in the city. Thus, contributed to a new thought in the art that opened alternative paths to the conventional standards. New artistic languages decomposed the traditional image of art like paintings or sculptures. They went forward over other possibilities, where the concept, the idea of the artistic work was the most important.

Victoria Newhouse (1998) cites that '*happenings of artists in lofts and other non-institutional places proliferated in the 1960s, as well as other forms of art.*' (p. 189) The author reminds us, for example, of site-specific installations, minimalism, *arte povera*, and earthworks, and the deconstructed buildings of artists such as Gordon Matta-Clark.

Jay Sanders and J. Hoberman (2013), regarding the movement of alternative art spaces, published Rituals of Rented Island, concomitant to the homonym exhibit organized in Whitney Museum of American Art, in 2013. The authors addressed some artwork, with emphasis on the happenings and performances in underutilized real estate, then converted into alternative art spaces, thanks to urban policies that allowed their occupation by artists. Among such policies, the National Endowment for the Arts (NEA) is the one in the lead.

In the regions of the Lower East Side and Soho, there was a significant set of empty industrial buildings. Associated with urban policies that enable the occupation of these spaces from the young artists in production, these neighborhoods have been confined to places in the meeting and communion of those social groups attached to the counterculture.

The shift of factories and industrial sheets of Manhattan to other regions and cities and the attraction of an increasing number of artists for these areas made that increasingly integer buildings were converted into lofts, ateliers, and artistic creation studios. In them, Happenings and performances occurred frequently.

4. PS1, 1976 / MoMA-PS1, New York

The PS1 Institute for Contemporary Art Center has launched with the art exhibition named *Rooms*, in the summer of 1976. The show with site-specific Installations occupied a former 13-year abandoned building. Originally built in 1890, the building architecture reminds us of romantic revivalism, and it was a place for the Public School n.1 - PS1, located in borough Long Island City, district of Queens, New York City.

The School had been deactivated in the early 1960s and was left in a state of abandonment. Someway, it was used as a shelter for the construction materials for the subway expansions, like a warehouse City Hall. (Fig. 1)



Fig. 1

From the alternative art spaces movement, Alana Heiss had led the IAUR - Institute for Art and Urban Resources, as a department looking for those empty places that could be set to artist studios, artist-run galleries, and lofts to live; once they would be cheaper and more accessible to artists - here, those artists from conceptualism contemporary art, site-specific, installation, happenings, and performances. The counterculture and underground scenery were up to those places, mainly warehouses and big spaces, sometimes and frequently located at the nowadays very expensive Soho.

The IAUR had known the existence of the empty former Public School building and started to gather ways to promote an occupation in place with an avant-garde idea of creating what later one could classify as an *anti-museum* (as Alana Heiss did herself). Brenda Gill, Heiss´s colleague in this work also mentioned that PS1 *represented a new contemporary art platform* (Gill apud Reiss, 1999, 113).

For the occasion of the PS1 Institute for Contemporary Art Center's inauguration with the *Rooms* exhibition, the Artforum magazine dedicated its 1976 October edition (Foote, 1976, 29). According to the publication, Alanna Heiss by the IAUR had got a subside of $150mil from the NEA - National Endowment for the Arts (by that time directed by the artist and art critic Brian O´Doherty, author of Inside the White Cube). That amount was only sufficient for some basic repairs in installations, leaving the building with its abandoned aspect. Nevertheless, a sort of surprise and new invitation for the public - to see new art forms in new art places, with new ideas.

As said by the artist Joseph Beuys, *it is better to exhibit in a factory than in a brand new museum* (in Montaner, 1995, 89). Within this ideal, Nancy Foote (1976, 29) described that the majority of artists realized their artworks *from the suggestions and the nature of the place*, circumscribing the site-specific Installations exhibited by 75 new artists. The author also classifies it as an act of renovation, a reaffirmation that their art scene was thriving, differently from the 1960s.

The visitors of *Rooms* entered the building of that old school in the same way and place the students used to. From the entrance, corridors articulate the rooms where artists made their works. Not only inside the building - from the basement to the attics, from stairs to bathrooms -, but also the open spaces were occupied. (Macedo, 2015)

In 1998, PS1 was reopened after the Frederik Fisher architectural design renovation, which gave PS1 new open exhibition spaces and its entrance was put into the back of the building, easier and closer to access from a subway station, one block away. (Fig. 2)

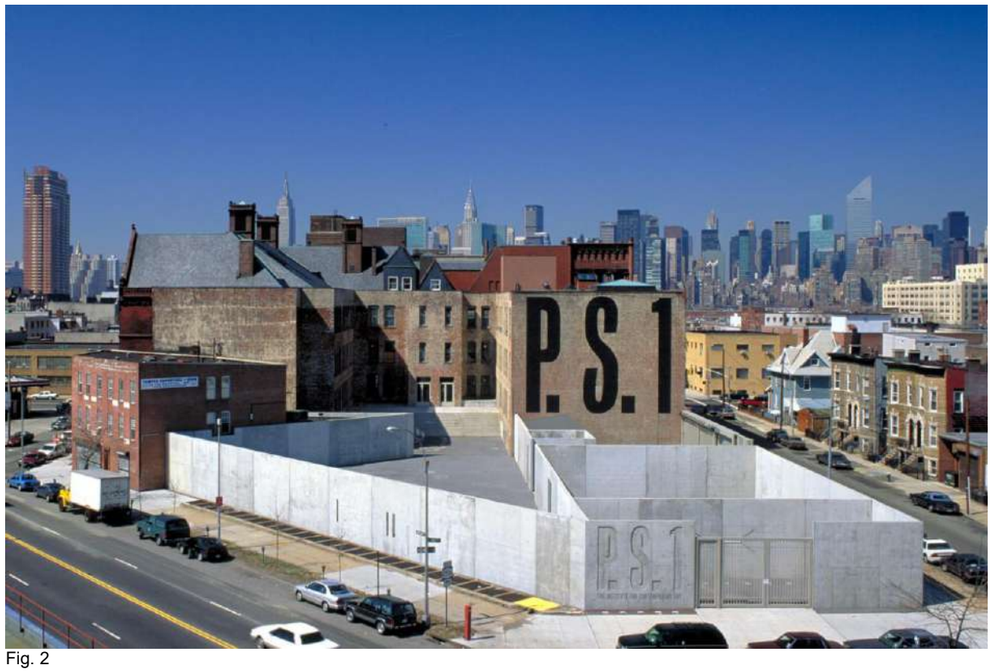


Fig. 2

By the end of the 1990s, 20 years after the PS1 inauguration, Alanna Heiss and Glenn Lowry, then the director of MoMA-NY, started to talk about ways and alternatives to consolidate the existence of PS1, with more resources. That is when the fusion with MoMA had started and was officially named MoMA-PS1, in 2010. Would it be necessary to say that nowadays this is a trend and gentrified area?

5. The Case of *Milano*: MACAO

By the end of the 1990s, Italy has started to see a national uprising movement claiming for more accessible culture centers in townships. Thus, it has led to the occupation of abandoned public spaces, architectural voids, and empty buildings. A notorious squat comes from Milano, when the art-collective named MACAO occupied the Torre Galfa in May 2012. (Fig. 3)

Built by the end of the 1950s, Torre Galfa was the headquarters of an oil company until the 1980's - SAROM (*Società anonima raffinazione olii minerali*) -, and of a bank until 2000 - BPM (*Banco Popolare di Milano*). For more than 10 years, that central well-located building remained abandoned, unoccupied until MACAO activists, through self-organized teams, squatted the building.

Artists, architects, and other cultural professionals gathered into meetings promoted by MACAO. Torre Galfa placed not only those encounters but also artistic expressions, throughout the construction. Their action brought into discussion new ways of creating a museum of art, built by citizenship. The art-collective defends their manifesto as a product born from local communities, from day-to-day struggle, from pure political action. In their words:

'Avoiding the creative industry paradigm, and trying to innovate the old idea of cultural institutions, the main goal is to consider art production as a viable process for rethinking social change, elaborating independent political critique, and as a space for innovative governance and production models.
The research concerns the labor conditions in the creative industry and the cultural sector, ***the right to the city****, and new forms of organization and technological solutions for cultural production.'* [1]



Fig. 3

MACAO had claimed, with experts of the Italian Constitution, that a political movement of citizens has the right to take charge of private property, in case of misuse of the space. Although the art-collective notorious efforts, the Torre Galfa occupation last only for ten days. On 2012, May 15th, the group was forced to dis-occupy the building. Groups with more political influences got it back and put it into the real-estate market; recently sold by millions of euros.

Now, MACAO is in the former slaughterhouse of the Fruit and Vegetables Market, *ex-Mercati Generali di Milano*, in the city's east border (Fig. 4). A place for self-organized funding raising events, such as concerts, theatre performances, art exhibitions, and other cultural experiences. This case of a non-institutional, yet a notorious self institution, brings out an alternative form of participatory welfare self-management, from the bottom. Some way, a place where to imagine a future for our lives. It is eco-design research with community and people, facing the forms of expropriation due to gentrification; an association by new testing and experimental financial instruments.

Looking to map these welfare experiments helps us to think about social spaces where young people, independent and underground culture, through collective self-production practices, can have a place in our contemporary urban life. In the MACAO manifesto, *the innovation capability of this experience can inspire similar laboratories in the future.*[2]


Fig. 4



Fig. 5

6. Conclusion

Similarities between the original PS1 Institute for Contemporary Art, from the alternative art spaces movement in the 1970s, New York, and the recent case of MACAO art-collective occupations in Milan, Italy can arise, now.

Both cases emerge from contradictory contexts. If, for the first case was the New York counterculture effervescence scenery, for the second case is the contemporary culture looking for alternatives to our neoliberal capitalism that gentrifies cities, like urban places into the auction stocks.

For the permanence of PS1, MoMA-NY found an ideal place for feeding new young artists and art consumers, yet with architectural competitions for ephemeral structures, built for the summer parties when music and outside experiences take place. Around the MoMA-PS1, new demolitions and new expellings happened and happen. It is a case where gentrification through art movements is clear.

MACAO, already expelled from their primary occupations - where the urban costs could get higher without them, therefore: gentrification -, is still in the *ex-Mercati Generalli di Milano*. Yet no central, but already focus of many interventions and political struggles trying to take their activities out of there. This is about an enormous area of land in the city of Milan, where events and fashion trends go fast.

From the first case, relating to what we could expect for the second case, it is seen how different points of view can cause, and its consequences. It is good for the capital and the ones who will make profits, but the sense of community and local places with its inhabitants, culture, and the routine life relations and interactions got lost; and seems to get faster.

These two cases bring us new purposes and meanings. Reusing built structures is a way cities can grow with some sustainability, avoiding much more costs of production and commuting. This article dialogues with the possibility of helping local communities around those new venues with art experiences in the contemporary city, with urban policies, supporting for the urban cost fees of life not get higher so rapid for the older renters inhabitants. Thus, an alternative for us to develop our sense of community and urban culture. If it is a critic of reality, how to live together in the contemporary world?

Notes

1 Macao, *Nuovo Centro per le Arti, la Cultura e la Ricerca*. Excerpts from: http://www.macaomilano.org/spip.php?rubrique44 Sep,,2020
2 idem

Image Captions

Fig. 1. Exterior view of P.S.1. Photograph by Jonathan Dent, 1976 [VIII.I.8]. Source: In https://www.moma.org/interactives/exhibitions/2012/artistinplace/
Fig. 2. 1998 Reopening of PS1. Frederik Fisher Architects. Source: In: https://lobsintl.com/project/moma-ps1.
Fig. 3. Torre Galfa occupied by MACAO, May 2012. Source: In http://cdn.blogosfere.it/mondodonna/images/torre-galfa-macao-gandalf-anteprima-600x900-665936.jpg.
Fig. 4. View of the former Fruit and Vegetables Market, *ex-Mercati Generali*, at Via Molise, in the east border of Milan. Picture by Wesley Macedo, Apr. 2017.
Fig. 05. View of the entrance of MACAO, a former building of the Slaughterhouse of *ex-Mercati Generali di Milano*. Picture by Wesley Macedo, Apr. 2017.

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Learning by comparing

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Abstract

The *Comparative Architecture* subject from the MBArch Master of the ETSAB (UPC), proposes, as a learning methodology, the comparison of a series of images by pairs. Throughout the course, students elaborate a set of texts in which they bring out the multiple relationships that are established between two architectural or artistic works highlighting those aspects of both images that otherwise would not have arisen.

In this matter, the choice of comparable examples, as well as the historical, stylistic, or disciplinary mainstreaming of the works is essential, since they allow establishing relationships that go beyond typological, spatial, or temporal patterns and allow very different discourses depending on the chosen 'opponent'.

The paper will explain, ten key methodologies of *Comparative Architecture,* a teaching methodology implemented during 10 courses taught from 2010 to 2020. A learning system that is, at the same time, an instrument of analysis and a project tool, which aims to sharpen the gaze and the critical sense of the student.

From the necessary 'archaeological survey' of disassembling the apparent forms to reassembling them through the comparisons made, concepts such as version, analogy, contradiction, deformation, transformation, extension, reference, paradox, reminiscent, or hyperbole, arise. Terms that are found in the connections that are established between the images and that grant a unitary argument to the personal recomposition that the comparative process entails.

As an example, we will explain, among others, the master lines that arise from the mutual enlightening of works such Giuseppe Terragni's *Casa del Fascio* in Como (1936) and Rafael Moneo's Murcia City Council (1998); the AEG by Peter Behrens (1913) and the Fronleichnamskirche in Aquisgran by Rudolf Schwarz (1930); or the *Rotating House* drawing by Paul Klee (1921) and the Kal'at Sim'ân Monastery plant in Syria (450-470). Works whose comparison shows the mysterious qualities that brought them together.

Keywords: *comparative architecture,* teaching methodology, architectural analysis, architectural design, learning by comparing

Introduction

The *Comparative Architecture* subject, from the ETSAB MBArch Master (UPC), proposes, as a learning methodology, the comparison of a series of images by pairs. Throughout the course, the students elaborate on a set of texts in which they bring out the multiple relationships that are established between two architectural or artistic works. The teachers give most of the images and, occasionally, the students themselves must present a complementary image or a new couple.

This comparison-based learning system is a powerful instrument aimed at sharpening the students' gaze and critical sense, because the analysis work is not limited exclusively to a single building, but is carried out by opposing it to another. This allows one's characteristics to reflect in the other and relationships to emerge revealing aspects of both that would not have appeared otherwise. It is as if, to study a building, we would approach it from the other's perspective, thus generating a new point of view.

At the same time, this course shows that when we design a building, we also compare. Often, in the process of developing a project - especially in the first steps - we use comparison to set the arguments that justify its dimension, program, composition, form, or relationship with the environment. By comparing we look for certainties or reveal doubts, so that, through the comparison, we canalize our architectural background. Thus, this subject has also the objective of developing its own methodology and knowledge that may be useful for the architectural design process.

The choice of the examples to compare is essential, since the discourses may be very different depending on the selected 'opponent'. A well-known case of comparison between seemingly unrelated buildings is that of Villa Foscari (La Malcontenta) by Andrea Palladio and Villa Stein-de-Monzie by Le Corbusier and Pierre Jeanneret, an exercise in formal abstraction developed by Colin Rowe in "Mathematics of the Ideal Villa "(Rowe, 1999), whose reading is required for this subject. Other important references would be the multiple chained examples displayed in *Complexity and Contradiction in Architecture* (Venturi, 1999), the cultural links of *Lessons on Balance* (Cortés, 2006), the specific comparative case studies of *The Artisan* (Sennet, 2009), or the analytical confrontations of *A Genealogy of Modern Architecture: Comparative Critical Analysis of Built Form* (Frampton, 2015).

Likewise, the comparison has been part of the pedagogical method of some of the most prestigious art schools with the aim of encouraging greater creativity in the students. Johannes Itten, for example, proposes learning by comparison in his method of materials' analysis from the Bauhaus *Vorkurs* (1919-1923). According to Itten, all perception occurs by contrasting. Nothing can be seen by itself, but rather a comparison to something with a similar or completely different quality is always necessary (Argan, 1983: 45-47). For this reason, many of the exercises proposed in the subject consist of the arrangement of signs, materials, tones, and colors in contrast to each other. This allows us to appreciate better the intrinsic qualities of shapes and materials, and to stimulate a dialogue between them.



Fig. 1

Three examples from the comparisons proposed in 2015, 2016, and 2017 courses demonstrate the ability of some images, regardless of their context, to activate the mechanisms that link them based on the design strategies or in their formal composition (fig. 1). In the first case, both the stairs of the *Georges Pompidou Center* in Paris and those of *La Granja* in Toledo appear as autonomous organisms externalizing their upward structure, to recognize them as essential elements of vertical connection. In the second comparison, the interiors of the *Cabarette Aubette* in Strasbourg and the *Café Una* in Vienna are radically transformed through surface operations apparently unrelated to the architectures that contain them. The use, in one case, of panels with geometries and basic colors due to Neoplasticism and, in the other, of ceramic mosaics that reproduce organic patterns of Ottoman inspiration, transforms the perception of existing spaces and surprises the customers-spectators. In the third example, the typological reference to the gabled roofs of traditional architecture constitutes the formal mechanism that unifies the apparent volumetric randomness of the expansion of the *Didden Village* houses in Rotterdam and the new building for the *Vitra house* in Weil am Rhein.

The ten key methodologies of *Comparative Architecture*

In the *Comparative Architecture* subject, we follow a series of premises that constitute the ideological and methodological foundations of the course. These keys offer the necessary tools to carry out the comparisons and illuminate the choice of the examples to compare.

1. Relativization

One of the first premises to carry out a comparison is to relativize the identity of the compared objects: each of them is perceived and interpreted in a different way, depending on the proximity or distance that it establishes with the other. Thus we move away from its absolute value, fixing our gaze precisely on those 'relative' aspects that allow us to make a comparison. Sometimes these manifest in some common factor or in some evident difference; other times, these same parameters are hidden and must be made visible.

The comparison, therefore, makes only visible which is comparable, noting the real or fictitious seams, between the analyzed works. In this interesting intellectual and perceptive exercise, the reality is fixed by the binding dynamisms that underlie the relativizing observations of those who analyze the works.

2. Transversality

A comparison should not be restricted to constructions and works of art from the same period or limited to those that show a certain style. The historical transversality of the examples allows us to go through the history of architecture in the intended sense that we want, to highlight or raise those comparable aspects of buildings or productions from different periods. Some important architecture critics have already demonstrated how close classical and modern architectures are in the design project approach (Rassmussen, 1974; Rowe, 1999; Venturi, 1999). Transversality is, therefore, a more flexible and versatile way of approaching architecture, without useless stylistic or temporary barriers.

Bruno Zevi insists that *"the modern language of architecture is not the language of modern architecture, but rather the way to go through all art history, discovering its modernity. History has a communicative vocation that can be re-contextualized in a perennial way ".* (Zevi, 1997). And, in the same way, architects such as Louis I. Kahn, Robert Venturi or Le Corbusier, among others, show us the past through the works of the present, giving *"life to the dead as something logical and natural"*. (Scully, 1999: 09-17).

On this round-way path in which, as in a game of mirrors, the present is recognized in the past and the past is reborn in the present, the genuine essence of architecture, the authenticity of its original essential and timeless characteristics emerge. This a-historical position that transcends fashions and styles invites you to explore the invariants of the best works of all time that, mostly, are shown as a piece of our contemporaneity.

This transversality through history is manifested in some comparisons throughout practically all the subject's editions (Fig. 2). In the first example, regardless of their temporal distance and stylistic differences, the compositional elements of the halls of the *Maison La Roche* by Le Corbusier, and the *Little Thakeham House* by Sir Eduard Lutyens, build two versions of the same space, in which a series of balconies overlook a large interior room, around which the main circulations of the house occur. In the second case, the complexity in the articulation of the outer corners of the *Torre Velasca* and the inner corners of the *San Lorenzo Basilica*, both from the assembly or modeling of the structural and cladding elements, shows the decisive ingenuity of two buildings of very different times and typologies within the same city of Milan. In the third example, the temporal dichotomy contained in the urban sequences of both photographs establishes a cross-dialogue between four buildings from different periods. The porticoes of the *Neue Nationalgalerie* in Berlin and the *Maison Carrée* in Nimes, respectively, focus their perspective on two buildings that are temporarily and stylistically distant: the *Matthäikirche* and the *Carrée d'Art* museum. In this game of reflections, a Roman temple establishes a space-time dialogue with a museum from the end of the 20th century; and a museum from the 1960s exalts a 19th century -rebuilt after the Second World War- neo-medieval church.

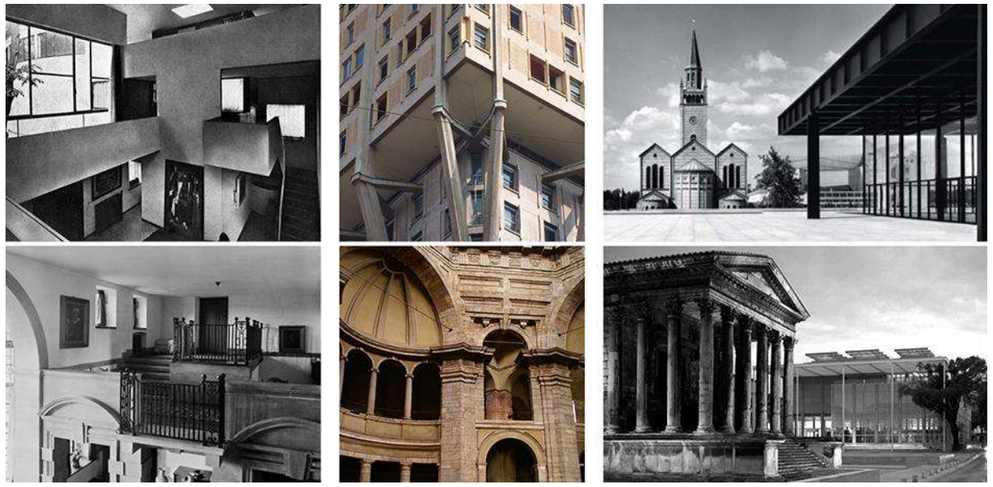


Fig. 2

3. Interdisciplinarity

A comparison should not be restricted to a certain historical epoch, neither to a certain discipline. You can compare a painting with a city, a narration with a building, a sculpture with a crafts work, a mural with a musical composition. What is important is the common register that makes them comparable, the associations that are present in the motifs and in the different artistic creation's referents.

The disciplines' interrelation has its antecedents in the 19th century when philosophers like Herbart and Zimmermann conceived aesthetics as 'the science of form' and showed the morphological coincidences between art and science (Tatarkiewicz, 1990: 260). At the beginning of the 20th century, Theodore Cook (Cook, 1914) and D'Arcy Thomson (Thomson, 1917) demonstrated the common fields that exist between the forms of nature, artistic and architectural constructions, mathematics, and geometry. A finding that architects such as Frank Lloyd Wright (Dezzi Bardeschi, 1977), Le Corbusier (Ozentfant, Jeanneret, 1921) and Louis I. Kahn (Kahn, 1962; 1969) among others joined.

Interdisciplinarity is fundamental in the comparative method because it allows us to recognize similar composition mechanisms in multiple manifestations of reality. The syntax that articulates the relationships between the images and that reveals the abstraction of their original meaning allows us to acquire the ability to relate very diverse phenomena that, directly or indirectly, are implicit in architecture.

The following three comparisons exemplify the implicit relationships between art and architecture; boundaries between the two disciplines are blurred in them (fig. 3). In the first, the plastic deconstruction of Paul Klee's *Revolving House* links with the elements' geometric abstraction of the Syrian *Kal'at Simân monastery's* ground floor, as both compositions rely on the centrifugally random arrangement of the components and volumes built around a central void. In the second, the disappearance of the limits inside Piet Mondrian's *Atelier 26*, where the geometric materiality of the artistic work invades and defines the room, contrasts with the chromatic saturation of the space in Henry Matisse's Red Studio painting, in which the red background acts as a catalyst in the arrangement of the different objects, protagonists of the space. Finally, Fischer von Erlag's transformation from *Isola Borromea* on Lake Maggiore into an imposing Baroque palace with hanging gardens, is compared to the artistic-landscape operation of *The Floating Piers* on Lake Iseo, by Christo and Jeanne Claude. This intervention achieves the connection of a wooded island with the mainland through floating platforms that, geometrize and add color to a natural environment where water is the protagonist.



Fig. 3

4. The image
The course is based on the presentation of pairs of images, a starting material as a “graphic texts” that must activate a comparative discourse. But the images have their limits. Given the impossibility of visiting the buildings or having a direct view of the objects to compare, we must trust what the photographs expose. Hence the discourse may be partial because only will be comparable to what appears in the photographs, fragments of a much broader reality.

The value provided by the fragment is, according to André Malraux, the great contribution of photography. The partiality of the fragment entails the manipulation of the scale and the decontextualization of the work of art (Malraux, 1952). For this reason, the ‘miracle’ of the comparison must arise from putting on an equal footing condition two images that can be, in reality, in very different conditions.

John Berger also refers to the change in meaning that the work of art undergoes when photographed: *“the camera can pass over the canvases, breaking their unity: it can dismantle the unity of meaning that each work represents: alter its size, its color, isolating parts of a born undivided whole ”*(Berger, 2007: 8).

Nevertheless, to explain the images and build a comparison from them, it is necessary to go beyond the graphic reproduction: to get information, investigate but, at the same time, attend in a disciplined way to this ‘partial’ vision offered by the fragment that a photograph provides us. The text made on the photographs should emerge as the tip of an iceberg, showing only that small part referring to the images, which has been distilled from the extensive knowledge acquired from the compared works.

5. Deconstruction
For comparing you have to study and analyze. This implies disassembling the apparent forms, previously disaggregating the parts from the whole, so that, after questioning them, they can be reassembled again through comparison.

Bruno Zevi refers to deconstruction as a necessary critical instrument that induces to decompose the object and identify its constituent elements by approaching 'the box' from the outside, especially from the inside. In this process volumes are dismembered, parts are dismounted, sequences are reviewed or assemblies are verified, to penetrate into the spatial organism from its own dynamics (Zevi, 1997).

Robert Venturi quotes the poet T.S. Eliot’s method as a reference (Venturi, 1999: 19). In the first place, he talks about the necessary prior analysis, which includes the decomposition of architecture into elements. This disintegration is a process that is present in all creation and is essential for the understanding of all the aspects of the compared Works.

This first scientific work of ‘archaeological prospecting’ of the data, consisting of analyzing, separating, distinguishing, abstracting, and understanding each of the shredded portions, should not be ingenuous. The reading and understanding of the works and their fragments must always be governed by questions

and answers. It is about activating subtle encoding and decoding mechanisms to interrogate them from all their complexity. This requires imagination and a critical attitude: imagination, as a hermeneutical method of interpellation to the fragments to obtain answers about what is evident, but also about what is not seen; and a critical attitude, to question the official speeches that, many times, forget about everything that is "on the margins" and could be key to a suggestive comparative recomposition.

6. Reconstruction
Once the objects have been deconstructed and their parts broken down, analyzed, and questioned, the comparison exercise must elaborate on the ‘story’ that links them. Thanks to it all the elements will take on a ‘new life’ redirected to unify the shared experiences. This thorough work, constructive and speculative at the same time, consists of weaving the new threads that arise from the certainties or fictions that link both objects. All of this offers a very diverse range of results, since in this new creative and critical construction, as a result of the activation of a fruitful dialogue between the parts, there is a powerful tool that tests the decisions of each student.

This constitutes the main design instrument. When we compare, we design, because the product of the comparison between two buildings is a third building: a new entity that arises from the comparison between the two starting objects.

7. The plot
A Speculative reconstruction, rather than arranging analogies and differences analytically, must creatively and imaginatively re-compose the dialogue between the parts. For this purpose, the argument may become "the theme" that underlies each confrontation; the theoretical "body" of the discourse that redirects the dialog towards a specific territory. And that can even impose a new hierarchy.

Although the plot must be the personal result of each reconstruction, it can accentuate, in some cases, a common register between the examples and link, in a similar way, those more evident features that reconcile the two images. In this sense, certain arguments have been the "protagonists" of some comparisons as, for example, the version, the analogy, the contradiction, the deformation, the transformation, the extension, the reference, the paradox, the reminiscence, or the hyperbole, among others.



Fig. 4

The version is the argument that links the following three comparisons (fig. 4). The contrast between the photographs of the *Murcia City Hall* and the *Casa del Fascio* shows how the first building 'versions' the second in some aspects: in the composition of the façade but also in its urban position that relates it to a monumental piece through a large public space. The reference of the *Denver Art Museum* by Daniel Libeskind to the *Teatro Reggio* di Torino by Carlo Mollino is manifested in the labyrinthine resolution of some stairs in which -despite the temporal, formal and constructive distance- the voluntary complexity of the folds of the Slabs and the contrast between light and shadow link the two compositions. Finally, the version that Francis Bacon makes of *Pope Innocent X* based on the work of Velázquez, reproduces the same elements and expresses the same emotions and feelings of the main character, through a plastic composition of blurred brushstrokes of similar chromaticism.

The argument emerging in the comparison, in addition to being the backbone of a coherent development, is also the ideal place to identify the contradictions between the opponents, to reveal their different scales of complexity. Robert Venturi affirms that *“A valid architecture evokes many levels of meanings: its space and its elements are read and function in several ways at the same time”* (Venturi, 1979: 26).

Because, no matter how much capital the binary relationship on which the comparison is based, the peculiar are the fertile tensions that bring out the multiple nature of relationships. This will allow us to establish unusual links that transcend form and matter to create a 'fictional' art. And in this fictional art, in addition to the recognition of the rich complementarity between the parts, the necessary recognition of oneself through comparison must throb.

Enlargement, deformation, or dissociation could be three possible arguments for the following three comparisons (Fig. 5). In the expansion of the *Banca Privata Finanziaria*, the BBPR team of architects supplements a historic palace with a new banked-off top. This reproduces the morphology of the roofs of the adjoining buildings and is separated from the existing cornice by a cantilever whose shadow sharpens the independence between the parts. In the *Blankenberge* library, Sergison & Bates have also worked with an extension, but this time they superimpose a new facade plan in front of the existing building, becoming the plinth of the large original roof. The plants of the *Altes Wassenau* by Gottfried Semper and the *Chilehaus* by Fritz Höger exemplify, through deformation, the ability of a reticular system to adapt to the irregularities of the site, responding, at the same time, to the lighting and ventilation requirements and the particularities of the building's functional program. The dissociation between form and content is the main argument linking the pathos of the great façade of Peter Behrens' *AEG Turninenfabrik* in Berlin, and the exterior radicality of Rudolph Schwarz's *Frönleichnamskirche* in Aachen. In both, the strong symbolic meaning dominates because, in the first case, it is an industrial building that, to enhance the religiosity of work, adopts an exterior volume in the form of a temple; and, in the second, the temple is outwardly manifested as an industry, in order to underline the austerity and metaphysical essentiality that it represents.

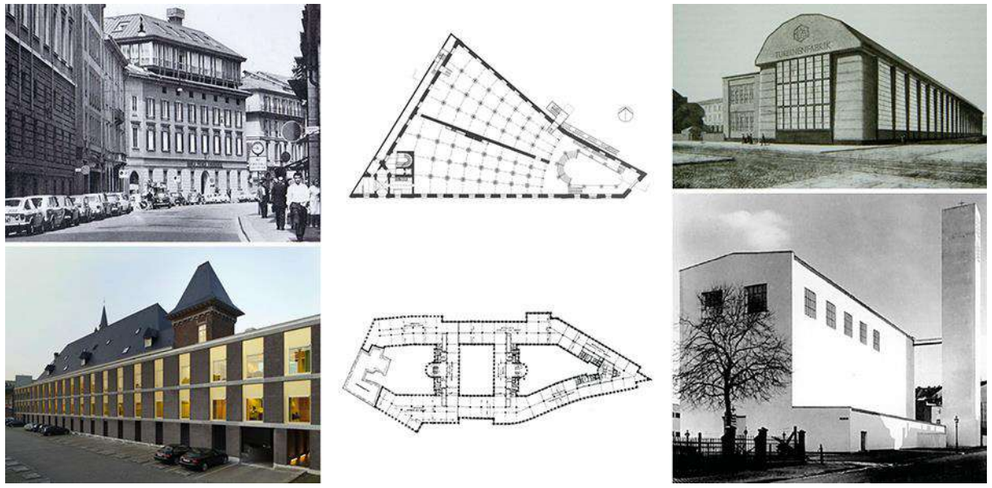


Fig. 5

8. The craftsmanship
In this personal and non-transferable recognition that emerges thanks to the exercise of comparison, the abilities obtained throughout the course acquire an important specific weight. The learning 'by doing', typical of an active dynamic, establishes close links with an artisan activity. In this "artisan" course, ideation and action are not separable. They are the basis of an intelligent, imaginative, subtle, and tenacious practice that, as in a profession, is learned over time.

The artisan's material for this subject is the word. Language articulation is what builds the comparison, and establishes orders, and explains the links between things in a specific way. For this reason, its mastery, relevance, and control are fundamental.

In the language control, there must be also a rationalization of the effort: *“the good craftsman assigns a positive value to contingency and containment”* (Sennett, 2009: 322-323). No ramblings or speculations

are allowed; you have to investigate, analyze, deconstruct, and build in order to compare. But, as in the best craftsmanship, the words’ moderation, the efficiency, and the concrete writing must prevail, in an exercise of economy and accuracy. Because, as Fiedler affirms: *“the most significant artists are always very exact spirits”* (Argan, 1983: 25-27).

9. The choral
The dialectic established between the images also extends to a community dialectic with the rest of the course’s mates. Beyond the elaboration of one's own discourse, the class dynamics is a choral one. The value of comparing two things is not only in the understanding of both elements and in the elaboration of a theory that underlies them but is also in the implementation of the vision of whoever compares them. The approximately 20 students who participate in the course construct 20 different speeches each week, demonstrating that the reading, comprehension, and comparison of two works of art has no limits. And this diversity is exposed and discussed in class in a community way.

In the exhibition of the multiple visions and particularities that emerged from the images, the different authors’ cultural backgrounds, the personal styles, the various readings of the same reality emerge. This recognition of the diverse allows the richness of complementarity:

“As a result of the comparative architecture workshop, we obtain a choral exercise, with forty-four eyes, that exposes the multiple vision and the particularities of a concrete fact, an architectural construction, reaching a deep reading of each of the compared works, as well as of the relationships that emerge when linking them ”. (Quintana, 2019-2020).

The ‘shared look’ enriches both the knowledge of the objects and the discernment of the rest of the students who attend them. This dynamic allows obtaining a polymorphous perspective of the analyzed works, resulting in an experience that generates new synergies and personal progress.

10. Conclusions: permanent learning
The acquired ability to describe in words the visible certainties or the invisible threads that relate two works of very different origins, conditions and characteristics, aspires to become, at the end of the academic year, permanent learning, a kind of daily reflection that allows, in the future, to face reality in another way:

"The point is looking again as if it were the first time, but without neglecting what was learned along the path of experience and life." (Armada / Berger, 2001: 7)

This assumed exercise that improves the comparison, contrast, parallelism, or confrontation between images, thus becomes a mechanism for feeding our cultural background, our criticism ability, and our design tools. And for keeping them active, one of the recommended practices is the continuous re-elaboration of our own anthology: a personal and non-transferable compilation of comparable images in which we recognize ourselves and build an open 'imaginary museum' (Malraux, 1952). A collection of buildings, paintings, sculptures, objects, texts, musical fragments or scenes in which, far from the classical showcases, the connections between forms, rhythms, concepts or words are in permanent activity, open to new interpretations and relationships, and, consequently, to new comparisons.

Image Captions

Fig 1. Left pictures: Comparison 1. Renzo Piano & Richard Rogers. *Centre Georges Pompidou.* Paris, 1977 and José Antonio Martínez Lapeña y Elías Torres: *Escaleras La Granja,* Toledo 1997-2000. Center pictures: Comparison 2. Theo van Doesburg: *Cabarette Aubette*. Strasbourg, 1927 and Lacaton & Vassal: *Café Una*. Viena, 2001. Right pictures: Comparison 3. MVRDV: *Didden Village.* Rotterdam 2002-2007 and Herzog & De Meuron: *Vitra house.* Weil am Rhein, 2010.

Fig 2. Left pictures: Comparison 1. Le Corbusier: *Maison La Roche*. Paris 1923-1925. Erwin Lutyens: *Little Thakeham House*. Storrington. West Sussex. 1902-1903. Center pictures: Comparison 2. BBPR. *Torre Velasca*. Milán, 1968 and *Basílica de San Lorenzo*. Milan. Right pictures: Comparison 3. Mies van der Rohe: *Neue Nationalgalerie*. Berlin, 1966 and Norman Foster: *Carré d'Art*. Nimes, 1993.

Fig 3. Left pictures: Comparación 1. Paul Klee. *Casa giratoria.* 1921 and *Monasterio Kal'at Simân*. Siria, 450-470. Version H.C. Butler. Center pictures: Comparison 2. Piet Mondrian. *Atelier, 26 rue Depart.* Paris, 1926 and Henry Matisse. *Red Studio,* 1911. Right pictures: Comparison 3. J. B. Fischer von Erlach. *Isola Borromea* nel lago Maggiore. Historische Architektur, 1721 and Christo and Jean Claude. *The Floating Piers*, Iseo Lake, Italia, 2016.

Fig 4. Left pictures: Comparison 1. Giuseppe Terragni. *Casa del Fascio*. Como, 1936 and Rafael Moneo. *Casa Consistorial*. Murcia, 1998. *C*enter pictures: Comparison 2. Carlo Mollino. *Teatro Reggio,*Torino, 1967 and Daniel Libeskind. *Denver Art Museum,* Denver, Colorado, USA, 2006. Right pictures: Comparison 3. Diego Velázquez. *Retrato de Inocencio X*, 1650 and Francis Bacon, *Retrato de Inocencio X*, 1963.

Fig 5. Left pictures: Comparison 1. BBPR: *Expansion* of *Banca Privata Finanziaria.* Milano, 1966 and Sergison & Bates. *Blankenberge Library,* Belgium, 2004-2011. Center pictures: Comparison 2. Gottfried Semper. *Altes Wassenau*. Wien, 1874-1877 and Fritz Höger. *Chilehaus*. Hamburg, 1923. Right pictures: Comparison 3. Peter Behrens: *AEG Turbinenfabrik*. Berlin,1923-1925 and Rudolph Schwarz: *Fronleichnamskirche.* Aquisgrán, 1929-1930.

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Representing architecture on film
The case of Roberto Rossellini and the Pompidou Centre

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Abstract

Centre Georges Pompidou, designed by Renzo Piano and Richard Rogers, was inaugurated in Paris on 31 January 1977 under controversy and public scrutiny. Soon after, by request of the French Ministry of Foreign Affairs, the legendary filmmaker Roberto Rossellini shot a 56-minute documentary devoted to the new cultural institution. This paper will discuss the means of this cinematographic approach to architecture.

Firstly, a broader context should be considered, as Beaubourg-Rossellini represents the meeting of two concurrent projects of diffusion of culture and knowledge. One is architectural, aiming to abolish the traditional notion of museums as elitist places where art is forcibly separated from life. Rossellini, on the other hand, builds upon ideas and methods developed in his vast televisual encyclopedia. Both initiatives, by their means, take on the old debates concerning spectator fruition and the political impact of art in modern society.

More interestingly, this encounter is a special example of architectural representation – and, therefore, a critique. The film does not provide an idealized vision: far from static or purely descriptive, it shows a lived space where life is inscribed in contingency through time and movement. This is mediated through a peculiar zoom technique, invented and operated by Rossellini himself, relating the image to an abstracted viewpoint. Thus, the image does not stand for a body set in space but is rather a decorporified and continuously moving gaze; it can hardly provide stable meaning or assert prescribed usage to architecture.

Symbolic allusiveness, spatial polyvalence, and social openness of the Pompidou Centre are met with a distant and ironic vision, and, by this, immersed in contradiction. Through ambivalent impulses that engage with figurative elements of the program while evidencing a disconnection between art and public, Rossellini's documentary is a curious, partial, and incisively critical film.

Keywords: Roberto Rossellini, Centre Georges Pompidou, museum architecture, camera movement, cultural critique

1. Introduction

The complex building of the Georges Pompidou Centre in Paris, frequently referenced simply as *Beaubourg* in allusion to the area where it is established, was inaugurated on 31 January of 1977 to great public controversy. A traditional local market had been razed to make space for the ambitious new art institution that challenged the very notion of what a contemporary museum could be. This was expressed by the building itself, in stark contrast to the cultural legacy of the city. Pompidou had a transgressive program that, according to its architects, intended to "bring down the wall that separated official culture and the public"[1].



Fig. 1

Instead of a secluded and elitist place that kept art apart from life, the new hi-tech construction was conceived by Renzo Piano and Richard Rogers to be a multipurpose open space connected to a public piazza. Its seven storeys rose high above the city. Sleek abstractions of glass and steel that characterized some of the earlier modernist architecture were recessed deeply into the building to reveal a complex thread of exposed structural and utilitarian elements. Services usually hidden by walls or ceilings were ostentatiously displayed in bright colors thus the façade becomes a thick zone of intertwined segments of pipes, conduits, air ducts, stairways, and terraces. This allowed for an open, unobstructed, and highly adaptable interior. It could receive polyvalent and contingent use, adequate to new artistic practices. Distancing itself from abstraction also made the building highly allusive, even symbolical: was it a machine, a factory, a refinery, or perhaps a strange ship with periscopes? It reached certain monumentality, also carrying a pop sensibility, as Reyner Banham noted, comparing it to the yellow submarine from the famous Beatles song. [2]

Overall, it shocked the traditional tastes and attracted serious criticism of intellectuals, most notably the philosopher Jean Baudrillard, who identified in the program a reversal of its intended purposes[3]. Not only it failed to promote culture but celebrated its deep coma to which the numerous visitors, who strolled around like in an amusement park, merely paid respects. Like a black hole, a monolith from Kubrick's 2001 a Space Odyssey, it absorbed all cultural energy, devouring it, in total disconnection and hyperreality, while the old neighborhood, "recoated and disinfected by snobbish design"[4], served as a buffer zone. Contrary to the exterior of the museum, which suggested circulation and animation, the interior and its polyvalence were quickly dissolved into emptiness and annihilation of art. Culture can only be, says Baudrillard, "precinct of secrecy, intimacy, initiation, and symbolic exchange, highly ritualized and restrained"[5]. The justification of flexibility and public engagement was a varnish that disguised a cultural collapse that emerged from the anachronism between the art and the building that harbors it.

Later, the *Beaubourg effect*, as Baudrillard described this phenomenon, would be perceived by authors as a change in paradigm, a shift that paved the way to the creation of more so-called *new museums* (a term critically used by Otília Arantes).[6] A certain *museophobia*, the skepticism of museums characteristic

of the early 20th century avantgardes, would change profoundly after the late 70s to become a *musomania*, an enthusiastic search by aspiring global cities for monumental, iconic, and spectacular buildings. [7] Some were so successful – especially if by the success we mean a never-ending multiplication and expansion – that franchises emerged, most notoriously after the construction of Guggenheim in Bilbao (1997). This formula of investment in culture and oddly shaped buildings that could revitalize and bring economic growth to cities was ultimately named *Bilbao effect*. The allusive power of these initiatives became so strong that the inauguration of Pompidou Centre gallery in Shanghai in 2010 has been described as "museum diplomacy".[8]

But Pompidou Centre was a first and at the time there was uncertainty. Press and intellectuals all seemed to be against it. "Those involved in the inauguration […] thought no one would come given the polemics", recalls the filmmaker and producer Jacques Grandclaude.[9] Without the consent of the Pompidou directors, the French Ministry of Foreign Affairs took initiative to make a film in the hope to divulge the new Parisian attraction to the world before the local quarrels spread further. Roberto Rossellini, a wildly recognized and reputable director, was approached and Jacques Grandclaude, already involved in some commissions for the ministry, was brought in as a producer.[10]

By the late 70s, the veteran Italian director who was (and still is) very much attached to a critical legacy of realism, modernity, and auteur theory was pushing for his project of knowledge and pedagogy. Distancing himself from current cinema, Rossellini worked for television between *L'eta del ferro* (1963) and *Cartesius* (1974). This period was marked by a continuous interest in history and human adventure, focusing on key developments of ideas and their social, economic, and political impact. Protagonists were frequently notable thinkers, inventors, or artists such as Socrates, Leon Batista Alberti, Blaise Pascal, Saint Augustine among many others.

In face of this historical approach, the Pompidou film represented a return to contemporary events. The shooting with an experienced crew (including excellent cinematographers such as Nestor Almendros and Emmanuel Machuel) took a week, ending on 6 May. After presiding the jury at Cannes Film Festival later that month, Rossellini returned to Rome. He died 6 June during the preparations for *Lavorare per l'umanità* (Working for humanity), a project based on the early adulthood of Karl Marx. *Beaubourg, Centre d'art et culture Georges Pompidou* is the last film directed by Rossellini.

2. Beyond realism

In an interview to the magazine Écran, Rossellini's impressions of Pompidou Centre seem skeptical:

> I looked at the 'phenomenon'. And then I made a phenomenological film. I think personally that people confuse culture and refinement a lot. Refinement for me has nothing to do with knowledge. But when people talk about 'culture' they always call it 'refined'. Before being refined, people have to think, and to know how to be human. Beaubourg is a flagrant thing: it's the exposition of refinement at all costs. I don't denounce it. There's no need to, it's enough to look at it.…I used neither music nor a narrator in the film. I wanted to show Beaubourg. I hid dozens of microphones everywhere and recorded everything the public said, who are running *en masse* to Beaubourg. I had to cheat to put some positive opinions on Beaubourg in my film. Because there weren't any.… But to have balance and not look partisan, I had to invent some positive remarks. Imagine that! [11]

Among the diverse aspects of this long quote, some of which will be addressed later, the one about simply "showing" Pompidou is perhaps most revealing. Those familiar with film studies could sense in this a reminiscence of another notable statement from Rossellini, given much earlier, in a 1959 interview: "Reality is already there […] why manipulate it?"[13] This phrase has been used to support a peculiar understanding of realist cinema or, to put it differently, the favoring of continuous duration over montage (manipulation). The real world, once exposed to the mechanical activity of the camera, could preserve its intrinsic richness and ambiguity in a way that was not granted by painting or literature. At its best, the very nature of this encounter, the temporal coincidence of a recording camera and an ongoing event, seemed to make reality just *be there* and *speak for itself*. Many would describe this as an emergence of a certain kind of *truth* because instead of rhetoric and style, film could be used to reveal the ephemeral and previously inapprehensible aspects of reality. The implications of these formulations, crudely summarized for this occasion, are vast and varied, in connections to phenomenology and writings of Cesare Zavattini, André Bazin, Sigfreid Krackauer, Amédée Ayfre, Merleau-Ponty, among others, and to explore them is not my intention at this point. It is significant to establish, however, that although not condemning montage completely but rather stating very specific conditions for its occurrence, the use of the long take was especially valued by the realist approach.

A problem emerges, nevertheless, when the duration is stretched to an extreme. Andy Warhol, for example, made *Sleep* (1964), a film showing a sleeping man in several long takes that alternate or repeat themselves for more than five hours. The same technique was used for *Empire* (1964), where shots of the top section of the Empire State Building last for more than 8 hours. What could reality say about itself in films such as this? All the revelatory powers of the medium seem dissolved in duration and banality. The tension between the camera and the reality is annulled and neither seems prone to be defined by expression or discourse, but through persistent continuity of time, repetition, and duplication. This is an ironic realization and contradiction of some frequently stated aspirations of filmic realism, especially the connection to everyday life (as opposed to artificiality of Hollywood studio fantasies).

Rossellini himself said in 1970 that the underground films took things to the "point of insanity, showing a man sleeping for seven or eight hours"[14]. So a *limit* is deemed necessary and, therefore, one might think of realism in film as a paradox: on one hand, it builds itself upon an optimist understanding of a camera and celebrates its disposition towards reality, yet, on the other hand, it calls for an agency to intervene in the process, or otherwise things might get to a "point of insanity" (that is where Warhol begins). Tag Gallagher described this paradox bluntly in somewhat auteurist terms: "[…] what is called Realism in cinema is not reality captured but the felt presence of the moviemaker, the dialectic between the subjective and the objective"[15].

However, Rossellini's film about Pompidou Centre, although an institutional documentary, can hardly be framed as realist. Speculatively, and to introduce further discussion, we might think of it as going beyond realism in a peculiar path. In this case, the reality is not corresponded by a typical, neorealist, camera, but with an varying zoom, an abstracted and distant gaze. The tensions are not annulled as in Warhol film, reducing it to a reiteration and triviality; instead, they are stimulated by transient attention of an ethereal point of view. More than simply documenting, the film is rather an adventure of perception, a manifestation of an exploring eye that affirms an activity and temporality of its own, despite reality. Instead of a single child framed and accompanied, like in the ending sequence of *Germany, year zero* (1948), in *Beaubourg* there is a multitude of things.

What this paper proposes as a critique of Pompidou Centre comes precisely from this withdrawal towards abstraction brought by a somewhat alien observation. In a sense, in its strongest moments, it implies not only a contingent time of reality but also a temporality determined by the very process of observation, conveying a great distance. Despite the differences, this remoteness and asynchrony bring us closer, perhaps, to the lacunar poetics of films by Jean-Daniel Pollet (*Méditerranée*, 1963; *Bassae*, 1963) or Marguerite Duras (*Césarée*, 1978; *Aurelia Steiner - Melbourne*, 1979; etc.), which develop from similar elements.

3. Varying image

Beaubourg Centre d'art et Culture Georges Pompidou follows a straightforward structure of a guided tour. A succession of 72 (mostly long) takes alternates between different parts of the institution, its surroundings, and the behavior of the public. Here, as other Rossellini's television projects, the use of zoom has been frequently brought into attention. It is just one aspect of a complex system developed by Rossellini that is usually associated with other movements, such as tilting, panning, or tracking.

If we look back to *The Age of the Medici* (1972-1973), the implications of this technical process might become clearer. During a scene in this trilogy focusing on the Florentine Renaissance, the character of Leon Batista Alberti explains the basic elements of linear perspective. As it is well known, a single viewpoint corresponded to the vanishing point is central to this convention of visual representation. Rossellini's approach to his historical frescoes, however, would not try to imitate this theory and would go in the opposite direction, occasionally combining multiple viewpoints to obtain a single image.

Rossellini's special effects were a variation of the Schüfftan process which consisted of placing a translucent glass partially covered in mirror-like reflective material in front of the camera lens. At the very moment of exposing the negative, a hybrid image was made by combining, in one section, a view of the space in front of the camera and, in another section, a reflection of a painting or a miniature standing beside or behind the camera. This method can be manipulated to obtain different levels of illusion for varying aesthetic purposes; in Rossellini's case, the aim is usually not so much the mimetic perfection, but an image filled with figurative elements establishing a hierarchy and a synthesis for visual pedagogy.

The architecture of Versailles in the *Taking of Power by Louis XIV* (1966) or the façade of Santa Maria Novella in *The Age of The Medici*, or the city of Athens in *Socrates* (1971) are all represented through multiple points of view. Also, they are coupled with zooming and/or tilting, and therefore the result is

even less prone to become a static window facing a world. This rendering of architecture runs in contradiction to Alberti's schemes which have largely been developed precisely for the visual representation of urban spaces and buildings. One might recall the symmetry, the proportions, and the timeless order of vistas such as the famous Urbino panels (*The ideal city*, circa 1480), for example. There is nothing like that in Rossellini's pedagogical cinema; even if in a scene a tableau seems to set, a variation is immediately introduced by movement and reframing (perhaps as manifestation of thought and curiosity).

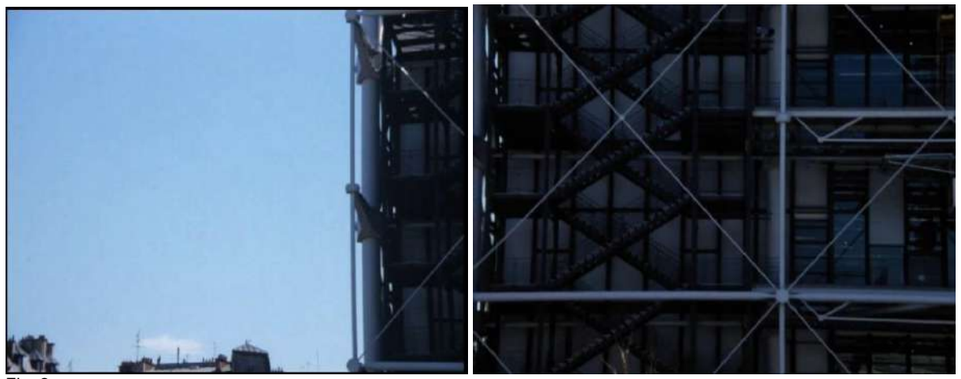


Fig. 2

In *Beaubourg* there are no special effects and there is no historic panel to be explored, but a complex and new phenomenon. Yet as in Rossellini's previous films, instead of a fixed perspectival geometry, architecture is met with a fluid, transitory image. The depth of field is reconfigured, and the space is sometimes rendered flat. Illustration of a prescribed and ideal use of the building is avoided and there no orderly representation susceptible to publicity. An example of this is the first appearance of the western façade, in front of the piazza. Instead of framing from a frontal or oblique viewpoint simulating a man's ground perspective, the shot starts in zoom-out showing the street from the de opposite side, slowly varying focal distance in a circular motion while framing cranes, buildings, and rooftops. At its maximum focal distance, when depth appears compressed and bright blue sky fills almost the entire image, the vast surface of the Pompidou Centre appears suddenly, laterally (Fig. 2.). In few seconds, the building fulfills the image as an agitated volume of geometry and color. In face this of ever-changing proportions and figurative aspects of the image in duration, the perceptual expectations are stirred, and the attention is engaged in suspense as if it pursued something to hold on to and settle.

The zoom, as Adriano Aprà has suggested succinctly, is an "eye that moves without moving".[16] Unlike a body set in a three-dimensional space (its anthropomorphic metaphor being a film camera), it assumes a position of an "abstracted eye", a mobile and incorporeal gaze that continually reconfigures its relationship with the visible. Zoom can hardly be described as a camera movement. Without the physicality of a camera, its optical expansions and contractions have been suggested by John Belton as a formal equivalence for epistemology[17]. Although we should not think of this approach in terms of the ontological nature of a technical device, its specific applications in structural films by Michael Snow certainly seem to corroborate such a disposition. [18]

During a take, Rossellini did not employ video assistance, and neither peaked through the viewfinder of the camera. He did, however, have a lever connected directly to the lens, and that allowed him to alter the focal distance (zoom) during the shooting. Although each take was previously outlined with the cinematographer and the tracking operator, this freedom enabled Rossellini to be prone to circumstance, to react if necessary, and guide himself by feeling and intuition. This also means that the image is a result of combined actions and movements of multiple physical bodies whereas neither of those can reclaim total control of the framed image. Thus, the agency, the intervention demanded by realism, is guided and fluid, but maintains a dissipate quality. Objects may be approached, yet not *perfectly* centralized in the frame; the movement is permanent and the visible reconfigures itself. We are unsure of what is aimed, therefore again emerges a form of the suspense of visual information, the very quality of Rossellini's zoom technique.

Beaubourg images also present themselves as surprisingly analog: despite the levitating and incorporeal quality of the movements, they preserve a uniqueness of contingency, a combination of variable manual inputs that guide but do not reclaim control, leaving them a sense of indefiniteness. To think further, we might consider of the very different movements currently feasible with motorized

electronic cranes and, additionally, the virtualized viewpoints, physically non-existent cameras, that go through three-dimensional scenarios created by software.

The difference in comparison to Pompidou is radical as the technique and technology differ in nature. Presenting a computer-generated virtual scenario dispenses a physical camera as a resource for inscribing continuity. Any movement of the viewpoint that anchors the image is fully premeditated and calculated. Thus, the resulting images are not simply *electronic*, but *electronically controlled*. The camera is an abstraction, its movements are *cold* and are hardly susceptible for indeterminacy. Quite the contrary: as mainstream use of special effects can attest, the aim is usually perfection and that can only be the expression of total control, of certainty. Detached from the material world, the software camera can forgo the time indispensable for the manual workings of a hardware camera; time is left in the realm of computer rendering and therefore is an instrument of obedience, not of site-specific speculation.

4. Beaubourg, its surroundings, and the public

A logic of spatial topography seems to prevail at the beginning of the film, locating the huge volume of the Pompidou Centre in the Parisian landscape while also relating it to other important monuments such as Montparnasse, Notre Dame, and the Pantheon. After the first zoom-assisted panorama, the four sides of the building and the neighboring streets are shown successively. Going further, with the museum still closed to the public, few sequences present the main lobby and the ongoing exhibition preparations.

The structure of long takes anchored in different parts of the building is soon stirred by the main event of the film: the opening of the entrance doors. Unlike the previous exploratory journeys, the camera waits patiently for the exact moment when the visitors are allowed to enter. Only then the movement aided by the zoom is resumed, focusing on one person from the crowd and following it. This flow leads to the circulation ducts, stairways, and terraces; they reappear throughout the film whenever it is necessary to punctuate a passage from one floor to another.

The visitors are approached on five different occasions: entering the main lobby; ascending the staircases; occupying the frontal piazza; using the library; strolling through the art galleries. In the lobby and at the last sequence in the art gallery, the prevailing strategy is anticipating and reacting to the public, trying to figure out and register their behavior. Images taken in the translucent circulation tubes are close shots that present the diversity of the visitors who are sometimes startled by the unexpected presence of the camera, an instance of spontaneity. However, there is no way of observing further these people as they enter and exit the frame quickly, being propelled by the moving staircase. Filming the frontal plaza from above relates the building to a crowd enjoying the outdoors, including an exhibition of children's amateur paintings. The noisy liveliness of this environment is subsequently opposed by the indoor spaces distinguished by the whispering of people and non-stop whiffing of the ventilation system.



Fig. 3

After a few long sweeping movements, short montage sequences with users operating a projector describe the access to archival materials stored in the library. In one of them, a series of thirteen slides of artworks are presented (Fig. 3). These images are, nevertheless, optically augmented segments of three works by Fra Angelico (*The Last Judgment*, *Annunciation and Adoration of the Magi*, and *Coronation of the Virgin*). Therefore, in the manner of the camera and the zoom lens in Rossellini's films, the optical instrument manually operated by a person can enlarge and investigate a visual representation bequeathed by history.

In the art gallery, the observation strategy differs: some distinguishable individuals wander around observing the art collections. These key figures – a man, a woman, and a few couples – enact a slow walk and look without noticeable reaction. Rather than real characters, they are figurative elements, reference points of movement that animate the sequences, and guide the itinerary for the camera. The interest in them does not develop as they are featured more as props, an illustration of the public in general.

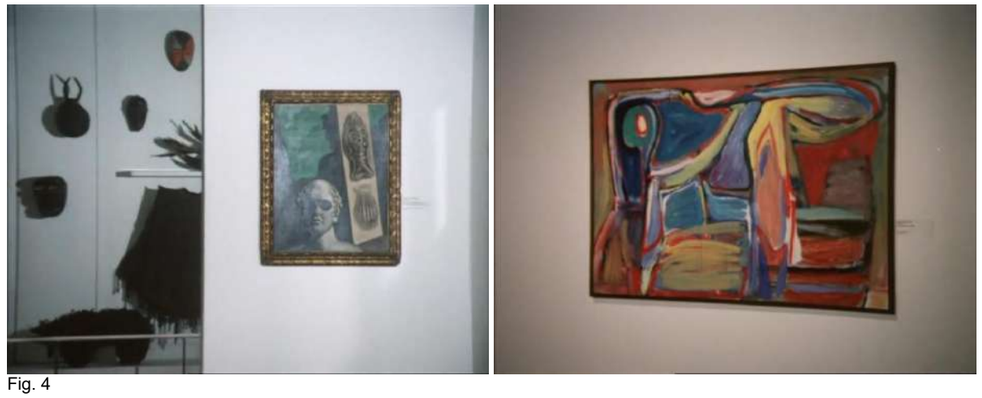


Fig. 4

Sometimes there are no human subjects, only the continuously moving gaze that does not stop to contemplate an individual artwork. Filmic space is reconfigured continuously, and when reference points such as ceilings and floors are lost, the artworks seem to levitate over a white background (Fig. 4). But at this point, there is no attempt at the pedagogy of art, as it is rendered as just one piece of the complex phenomenon of the museum. All things are leveled out by the indifference of the camera that does not react to a specific event or object and keeps a journey of its own.



Fig. 5

Therefore, given the duration, a series of heterogeneous elements are grasped in the same shot. No assertive interpretation comes from these combinations of statues, paintings, installations, exhibiting settings, panorama terraces, moving escalators, tension columns, lattice beams, and many visitors – although sometimes contrasts and disconnections seem to be deliberately emphasized. This is the case, for instance, with the sequences at the beginning that situate the building in the urban space. In one long panning movement the destruction of the old is met by the construction of the new: the colors of interior walls, visible in the rubbish of a demolished building (i.e. traces of homes and their occupants), are countered by the bright painted features of the Pompidou Centre (Fig. 5).

These figurative and chromatic shocks are matched by a soundtrack in which the humming of the construction machinery equals the yet unfinished hi-tech building, while the sounds of children playing, and sweet melodies of piano lessons relate to the old neighborhood. This opposition might recall the antagonisms and critique of modern architecture one could find in films of Jacques Tati. The main difference is that, in Rossellini's case, the image is continually reshaped through movement whereas in Tati it tightly matches a space set as a stage for choreography of caricature. In Tati, the sound is used to pinpoint a detail in the image; in Beaubourg, it functions as a diffused characterization. The ambient

sound is an elaborate mix from sources captured on location and thoroughly rearranged in postproduction. They operate in disjunction with the image, as a parallel complement, frequently with repetitive noises. Throughout the film, the soundtrack is also a feature of continuity as some sequences are grouped and immersed in the same acoustic configuration.

In the sound environment composed of many discreet sizzles, creaks, snaps, bumps, and other noises, the public is attending with occasional sighs, a cough, or an indistinguishable mutter. More importantly, the spoken commentary portrays spontaneous reactions. These remarks cannot be attributed to any person visible in the image, preserving the sense of the public as something general. Some voices are very judgemental and negative ("Hyper-realism is unbearable" or "Shit, I say shit when I see that, no kidding, seriously…"). Institutional voices usually provide practical information, such as the receptionist and the guide. Workers can be heard arranging details before the opening; it is uncertain who comments on the panels of Karl Marx, Jesus, Statue of Liberty, and Mao Zedong.

5. Final thoughts

Throughout *Beaubourg*, the public appears stacked in lines, moving as huge masses. Some visitors are quiet and inexpressive, but many are frequently displeased or simply lost. In the penultimate sequence in the art gallery a woman in red dress wonders randomly among exhibits and is ultimately captivated by the Parisian view from the window. This brings us back to the comments made by Baudrillard. The openness and freedom desired by the architects may have resulted in cacophony and confusion rather than an emancipatory experience. Has art been annihilated in an institution such as this, aided by an advanced multipurpose space that became squandered in irresolution and emptiness?

In *Concerto per Michelangelo*, Rossellini's previous project, a telecast shot at the Sistine Chapel, the art of Michelangelo was harboured by an architecture that gave cohesion, meaning, and wholeness to the experience. In a modern museum such as Pompidou Centre, things look more fragmented, dispersed, and colliding. Therefore, in a sense, the two of the last Rossellini's films establish a diptych that can be related to the recurring debates about mass culture, art reproduction, reification, and spectator fruition (such the positions of Paul Valéry and Marcel Proust analysed by Theodor Adorno [19], or, more recently, the stances of Manet and Baudelaire, Panofsky and Benjamin, discussed by Hal Foster).[20]

Beaubourg, the film, poses these problems with a distanced view, as observed disjunction, where perhaps a connection, a bond, can be established by the film itself. Rossellini's guided tour is an overarching structure, mostly following the main program, but with no attempts at art pedagogy or aesthetic fruition. It is neither a discourse in name of the institution nor the simulated experience of the individual. The distinctive process of the filmmaker and his team results in unique formal arrangements, inscriptions of observation, labour and curiosity developed on location. A broad view reunites a myriad of disparate subjects. They coexist in what are predominantly long takes (although they vary in duration) with some chance, yet no guarantee of establishing definitive links or an authoritative interpretation. The world is offered in complexity and contradiction by a cinematic tour that points us some things to see, hear, and reflect.

That is not to say the film is impartial. Trough the constraints of the medium it selects and rearranges different aspects of reality and does so with a certain method. The moving images are carefully steered, although still open for the ephemeral and circumstantial. The sound provides ambiances made of noises and few vivid reactions form the public. Between asynchronous arrangements of these elements lie some of the most assertive moments of the film, especially the voiced rejection of the art. Then again, the calm and steady pace of the varying observation reclaims a temporality of its own, something that might be described as another instance of asynchrony. Time is mostly not defined by the gestures belonging to the observed world, but in spite of them, by the act of gazing, resulting in tension and suspense.

The truly critical aspect of this approach, therefore, is not merely social, registering the behaviour of the public or the gentrification of the old neighbourhood, but also engaging with contrasts in the location, its geometry, texture, colour, space, and sounds. Achieving this through a special technique is precisely not abiding to established conventions, either of publicity or documentary. The overall feeling of distance and inquiry in *Beaubourg* seem ultimately more open than the statements made by Baudrillard and even Rossellini himself led us to believe. The recessed vision is a step back that asks us to approach the world with new eyes, to adhere to a different temporality, so we can be able to think. There is no real "plot" in this film; If for narrativity to take place an event must happen, then the main occurrence, the overarching action that gives this film cohesion, is precisely the itinerary itself, or, as this paper has been considering, a "story" of perceptual experience.

Notes

1. "It was difficult, in the early 1970s, to opt for a confirmation of a Parisian model of a cultural structure, and the Beaubourg was after all a controversial model of refuting it. While, for example, the site in Houston was in virtually memoryless territory, in which the time culture was yet to be built, in Paris, there was a wall to be torn down between official culture and the public". Renzo Piano quoted in Matteo Agnoletto, *Renzo Piano*, São Paulo: Folha da Manhã, 2011: 78. 9; my translation.
2. Reyner Banham, "Criticism by Reyner Banham", *The Architectural Review*, (May 1977), https://www.architectsjournal.co.uk/buildings/archive-pompidou-cannot-be-perceived-as-anything-but-a-monument
3. See Jean Baudrillard, "The Beaubourg-Effect: Implosion and Deterrence", *October* 20, (Spring 1982): 3-13, https://doi.org/10.2307/778604
4. Ibid., 8.
5. ibid.
6. Otília Arantes, "Os novos museus", *Novos Estudos Cebrap* n. 31 (October 1991): 161-169.
7. See Marcel Ronaldo Morelli de Meira, "A cultura dos novos museus: arquitetura e estética na contemporaneidade", (PhD diss. University of São Paulo, São Paulo, 2014).
8. Amy Qin, "*Museum Diplomacy* as New Pompidou Center Opens in Shanghai", *New York Times*, November 5, 2019. https://www.nytimes.com/2019/11/05/arts/design/pompidou-center-shanghai.html
9. Jacques Grandclaude, "Rossellini 77 Triptic", panel debate, Roberto Rossellini: Filming Beaubourg, Macba, October 10, audio, https://www.macba.cat/en/triptic-77-screening
10. Ibid. Grandclaude's production company was created in the wake of May 1968 events, after massive layoffs. "Instead of going out on the street, we decided to build a company with all the people who worked with me" (Ibid., panel discussion; my translation).
11. Roberto Rossellini, "L'Homme qui cherchait la vérité," *Écran* n. 60 (July 15, 1977): 45, quoted in Tag Gallagher, The Adventures of Roberto Rossellini, New York: Da Capo Press, 1998: 679.
12. Tag Gallagher, *The Adventures of Roberto Rossellini*, New York: Da Capo Press, 1998: 679.
13. Roberto Rossellini, "Entretien avec Roberto Rossellini", *Cahiers du cinema* 94, April, 1959, 6.
14. Roberto Rossellini, "A Panorama of History". *My Method.Writings and interviews,* ed. Adriano Aprà (New York: Marsilio, 1995) p. 200.
15. Tag Gallagher, "Reading, culture, and auteurs", Screening the past n. 34. (2014). http://www.screeningthepast.com/2014/12/reading-culture-and-auteurs/
16. Adriano Aprà, "Rossellini et la television: penser en images, penser les images" (panel discussion, Cinémathèque Québécoise, Montreal, Canada, February 28, 2008), http://www.horschamp.qc.ca/spip.php?article332.
17. John Belton, "The Bionic Eye: zoom esthetics", *Cinéaste* 11, no. 1 (Winter, 1980-1981): 20-27
18. See Annette Michelson, "Toward Snow", *Artforum* 9, n. 10 (Summer 1971): 30–37
19. Theodor Adorno, "Museu Valéry Proust", *Prismas: crítica cultural e sociedade.* Translated by Augustin Wernet e Jorge Mattos Brito de Almeida. São Paulo: Ática, 1998: 173-185
20. Hal Foster, "Arquivos de arte moderna", *Design e crime (e outras diatribes)*, Belo Horizonte: Editora UFMG, 2016: 81-96

Image captions

Fig. 1. View of the Pompidou Centre (Roger Stirk Harbour + Partners)
Fig. 2. – Fig 5. Stills from *Beaubourg, Centre d'art et culture Georges Pompidou*

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Thirdspace:
Thinking Architecture through Images

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Abstract

The core of my work is to research the phenomena of architectural montage in its creation, as a design method and spatial reading. I am interested in the values our built environment transport and try to reinforce their appearance, by assembling them. The critical research examines both the meaning of the image-archive and the technique of montage with the image-fragment for making architecture visible and conscious.
With the interest of understanding montage as a cultural practice that is characterized by appropriation, several syntheses (Analogue Collection) were examined in a series of small books. Existing spatial constellations and their content of spatial perception are recorded in a photographic practice and are then used as found material in own image-compositions. The compositions test the idea of the fragment as an architectural object with high potential for spatial readings. „It usually is an implicite comparison between two entities which are not alike but can be compared in an imaginative way. The comparison is mostly done through a creative leap that ties different objects together, producing a new entity in which the characteristics of both take part.“ (Ungers, 1982) Whether it is about material, style, proportion or cultural context - the superimpositions focuses on the search for *third spaces,* connotations that operate between contradictions and friction and have the potential to lead to alternative and subversive results.
The use of montage makes it possible to ask and discuss about the value of architecture in fictional scenarios. The created images focus on the formal dynamics of the perspective composition through the montage technique. The methodology for this design-based research is a both critical and creative shift and distortion of existing built environments that can lead to new readings of architecture and city without changing their physical substance.

Key words: Superimposition, Photography, Image, Fragment, Connotation

1. Introduction

"We live under an endless rain of images",[1] wrote Italo Calvino in 1988, when he discussed the accuracy and loss of language. With the *digital turn*, the presence of photographic images has again intensified in a remarkable way. The possibilities of producing and distributing images are easily accessible to everyone and therefore have an extreme influence on our perception–how we imagine our reality and how we view it. [2] One would think, that for all the joy of taking and collecting images, humans sharpen the ability to sense a physical relationship between themselves and the surrounding reality.

A few years later, in 1992, when the Italian photographer Luigi Ghirri died, he left behind a work in which "photography becomes a language that operates through the accumulation of meaning, where signs change and evolve when the world of symbols integrates with the physical world, leading to a *third* vision." [3] With photography, he sought to address the duality of physical and pictorial space, claiming it as a suitable instrument for discussing the relationship between the self and the outside world. In contrast to our eyes and bodies, the image works with two-dimensionality. At the transition from physical to pictorial space there is a *third space*, [4] a space of possibility between reality and its representation.

With this perspective on something *third* beyond the original and translation, the main topics of my research are presented. They move between the areas of spatial perception through the lens of photography and the overlapping and blending of different *readings of images* of architecture.
First, the necessity of the photographic series as a record, document, or proof of the spatial dynamics of reality and its representation, from which the repertoire as a visual form of our knowledge system emerges. Second, starting from the investigation of an artistic position, I examine the relevance of *photographic readings of space*, whereby a technique emerges that allows me to convey the knowledge I am striving for.

To this end, a design-based research concept is presented, which attempts to approach an architectural theme, a perception, through the medium of photography. This approach is applied to collisions between separate parts–reality and image–from already known situations that have been manipulated under friction, in order to create new physical relationships. To open up new perspectives, the essay uses several case studies to examine the significance of photographic series and the *montages* they contain for the perception of space.



Fig. 1

2. Thinking through Images

"What does a poem say? What does it communicate? Very little, to a person who understands it. Neither message nor statement is essential to it." [5]

When Walter Benjamin tried to translate the poems of Charles Baudelaire, he encountered problems. Although he was able to translate Baudelaire's words, something remained that could simply not be reproduced. In his foreword *The Task of the Translator* for the collection of poems *Tableaux Parisiens*, Walter Benjamin drafted "a translation theory that opens up the duality of the original and the translation to a *third sphere."* [6]

Luigi Ghirri (1943–1992), a trained land surveyor and one of the most famous Italian artists of the last century, wrote essays and photographic narratives about his vision. There is, for example, the work *Catalogo / Catalogue*, in which he recorded the areas and small details of cities and compared them in a documentary way. He concentrated on observing the structure, changes, and colors of the materials and decoded the "clothes of the houses," as he called the pictures in this series. Or in *Scala / In Scale*, a series that plays with the miniature theme park Italy in Rimini, he took up the potential of photography to create illusions. Here a focus on the natural and cultural landscape, a discourse on the relationship between reality and fiction through the mediation of two levels of reproduction: the physical scale and photographic reproduction. His work shows how to *think through images* and discover the poetry of man-made everyday life. With an eye for the external reality of what is assembled, he transformed everyday objects and situations into tools for the conceptual reflection of space. By continuously connecting and shifting these different spatial images, which were collected in archives, exhibited, and juxtaposed in series, he described scenarios of *spatial montage*.

Ghirri, who dedicated a series of 25 photographs from Paris, *Omaggio a Walter Benjamin / Homage to Walter Benjamin* (Fig.1) to the writer, "demonstrate that photography can be fruitfully read through Benjamin's notions of experience, montage, aura, beauty, mystery and dialectical image." [7] The relationship and duality between the original and the translation, between reality and representation, are fundamental themes that are expressed in his work.

The themes and concepts that Ghirri dealt with in his photographic work are diverse and form a series of dialectical explorations, from photography to research to the study of photography. The work shows that photographs are not faithful reproductions of the world, but a collection of fragments of what is seen. [8] His work suggests that all photographs raise an infinite number of questions about how we can *think through the image* and thus, spaces.

3. Architectural Montage

Montage is a cultural technique, a "work with materials that have already been produced or cut out or taken from prefabricated elements, which are then reassembled, arranged and composed." [9]

The photographic work of Luigi Ghirri, which is a continuous exercise in juxtaposition and is particularly relevant to the understanding of our time, offers a suitable framework for the analysis of *architectural montage*. It is possible to show a transfer from the above-mentioned themes, which have a similarly fruitful translation and superimposition of meanings that could create a *space of possibility* in a specific act of transformation. The investigation shown here revolves around a partial aspect of montage–as a strategy–which sharpens *spatial perception*, recognizes complex *spatial relationships,* and thus develops the thinking and action of design-intentions.

In terms of contextualization for the field of architecture, the research carried out here is separated from pure image representation or photomontage. Nevertheless, the classification and its origin must be clarified. The central technique of the present work on *montage* is developed from the rhetoric of image comparison with its origins in the methods of art history during the 19th century,[10] later as opposition to *collage,* one of the central representational techniques of modernism with the Dada movement of 1910, which is usually associated with the photomontages of Mies van der Rohe around this time.[11] It turned from the creation of catalogs and series of *architectural by-products* in the architecture and art discourse of the 20th century,[12] to contemporary photographic practices of architecture mediation and criticism.[13] We know this practice of overlapping and mage-pairing from Bernhard Tschumi's *The Manhatten Transcripts* (1976–1981) or O.M. Unger's *Morphology / City Metaphors* (1982). The latest debate, which was inspired by authors such as Sergei Eisenstein and Aby Warburg, has "expanded the concept of *montage* to a theoretical-aesthetic paradigm."[14]

Against this background, *montage* should not be understood and used in its context as a medium of representation, but as an operation and a tool for *spatial readings*. Furthermore, montage in this sense is not a reproduction technique that functions as a translation machine and translates a design into

images with the help of visualization programs. Rather, *montage* is a reconstruction technique that reproduces by means of overlapping and juxtaposing, but at the same time creates something new, [15] which in a successful result reveals something that was invisible or incomprehensible to the original, something *third*.

Starting from initial research efforts, the study of *architectural montage* has turned out to be an experimental application in our physical space. Not to pursue an ideal, but to take note of what has been found in a different way and to gain new insights from it, opens up new ways of thinking about architecture. This is tried and tested in the cases that follow.

4. Cases Studies
The reference to everyday life and concentration on the built reality reinforces the attitude with which the architect examines the existing city in search of the potential for new architecture. This approach to the built environment is articulated through a sensitivity to materiality, appropriation processes, composition and location. The "*minimal journey*" and the focused view through the camera lens are explicitly seen as a starting point for a critical examination of reality. The camera is used as a means of taking samples of a situation, which then become the material for the construction of the *montages* in a mental, visual, and spatial composition. Existing spatial constellations and specific spatial qualities were recorded in a photographic practice and then used as found material for own spatial transformation. Various techniques of *montage-operation* are questioned and presented in the following discourse on experimental montage.

Different techniques will be analytically examined and applied in practice. Architectural images will be examined, fragmented, and put together by superimposition and juxtaposition. It is therefore important to emphasize the personal image archive as a reservoir for later montage. At the end of an extensive collection, the methods form the art and provide a repertoire of results for the operation of *architectural montage*. All cases shown here were created during the seminar *Architektonische Montage* at the Chair of Design and Conception by students of architecture at the Technical University of Munich in the summer semester 2020.

4.1 Spectral Heterotopia

In contrast to utopias, Foucault calls *heterotopias* those places that are spatially real and effective, but lead to other places, other spaces, "to a certain extent spaces outside of all places, even though it may be possible to indicate their location in reality." [16]

Our physical space that surround us consist of more than what we can perceive in the volatility of our vision. Every day we generally see buildings as quiet, unchangeable, and mostly in a similar light. However, as soon as we carefully approach our surroundings, we quickly recognize certain changes in the physically immobile substance. In the following investigation into a *Third*, the deconstruction of our spectral perception is stressed. By manipulating what mediates between the object and the camera's light-sensitive receptors, images can be generated that cannot be seen by our normal eyes, mysterious, poetic images (Fig. 2).



Fig. 2

A camera is usually used to depict reality, a snapshot of what we see with our eyes. So it is fully adapted to our eyes. In order to make visible what we cannot see, the camera must be able to capture the light in its full spectrum. Such an experience allows a different intensity than the real view. What has been seen and what is already known can be rethought or even exceeded through the infusion of lively and radical colors.

To be able to decide what to make visible or where to direct the focus in the image, a decision on a spectrum of light waves has to be made. Every light spectrum has its own qualities. With appropriate filters, material, environment, color, etc., are intensified. Brightness and saturation can be determined via aperture and iso value.

The choice of typology should provide a versatile context. With their simple structure and their agricultural use in open fields, *storage buildings* are objects to which little attention is paid. With their bases, different materials, colors, structural properties, and environments, they are very multifaceted architectures.

In order to reveal this potential, the objects are photographed at different times of the day, with different filters and exposure times. Because the result of the picture can only be checked afterwards, intuition plays a major role in these pictures. Apparently, those simple structures and banal materials can become a creative tool for rethinking designs. It not only changes the way we deal with our environment, it also gives the viewer a new way of *reading architecture*, the aesthetic value of which seems to have been lost in reality.

4.2 Meaninglessness
"Man is addicted to meaning, thus he directs all his actions" [17]
Most encounters with *meaninglessness* and *nothingness* are felt as disturbing. The *meaning* is generally seen as a cornerstone of human existence, as what we strive for. This was made famous by Viktor Frankl in *Man's Search for Meaning*, in which he showed how people will often try to find meaning in life even in the darkest situations. But what is at stake when groups of people negate this position? What exactly is going on in this apparent turning towards nothing? The idea of a potential in *meaninglessness*. This should be transferred to architecture and critically questioned.

In architecture, striving for meaning, in the sense of an all-encompassing concept, is usually superior to a purely functional design. The thesis is that in every creative act the dependence to look for meaning overshadows the potential of a sober and detached approach.

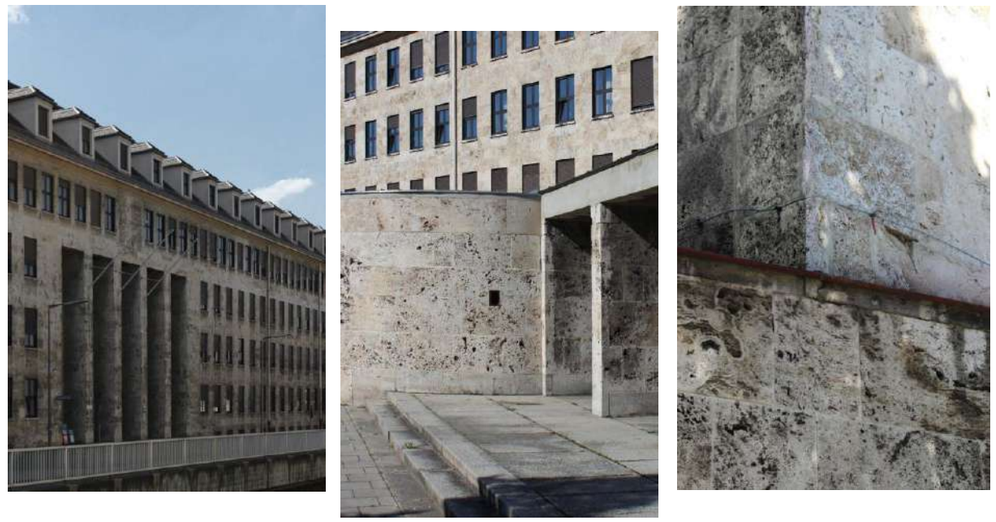


Fig. 3

To translate this thought into confrontation, several buildings in *Munich, Germany* were perceived in a context-free way. They have left their original use behind to acquire a new meaning. Buildings were specifically selected that were built during the Nazi-era under the Nazi ideology, a kind of monumental modernity.[18] The selection has deliberately distanced itself from the neoclassical buildings and restricted itself more to representative military blocks (Fig.3). The three buildings (the other two are not shown here), however, have a similar size, but differ in their construction and design. These exact aspects will lead to an otherness in a later transformation on closer examination.

After several excursions, the selected buildings were photographed from different angles in a second step. After a serial sorting, the recordings were "read" in order to recognize the "essence" of the building. The connection to the history of its creation should be hidden in order to consciously pay attention to the shape, structure, and material properties. The cubature was not as essential, but the special features in the facades, offsets, joining and corner points were decisive for the personal repertoire of design elements. The "exquisite" fragments were transformed into several working scripts and modeled as a composition to a "DNA" of the original building.



Fig. 4

As a "piece" from the building, a composition of the elements, the transformation shows an approach reduced to form and structure (Fig.4). The translated "DNA" allows references to the architectural ideology of the Nazi regime, but is abstract enough not to be perceived as such. The scale is withdrawn from the "piece". It is an accumulation of the perceived peculiarities of what is there. Will one always see these buildings in the negative context of their history or can they be viewed detached from their historical context?

The methodology indicates that there is great potential in the approach that is detached from "meaning". This is not a denial of history, but is capable of finding characteristics that would otherwise be lost under the "dome" of meaning.

4.3. Empirical Perspective

This work was developed from empirical drawings through "*minimal journeys*". The results confirm the thesis that the greatest inspiration lies in the often hidden, ordinary, and banal things in front of the door. These findings in the ordinary are subconsciously linked to personal experiences and developed into a thought of a space. The attempt to translate these images in mind into architecture is the aim of this study. The work evolved from a search for new sources of inspiration that could enable an unconventional way of designing. If you look at the result of the work, a space becomes visible that is limited to essential elements of the architecture. The light is what lets the materials and their characteristics "speak" what gives the space depth. It is the arrangement of the space-defining elements and materials that generate exciting and unexpected proportions. The result of the work is the representation of a *third space* from an already existing space idea, which gains a new context and character with the idea of the *montage*.



Fig. 5

All of the newly created architectures in this *montage* series (eight in total) are the result of an unconventional approach to these "primitive" architectural spaces. Photographs of *spaces in between* a small area in *Munich*, which, with the help of a rotation, create a new experience of spatial proportions and perspective, which enables a new interpretation of such space (Fig.5). The photography was only minimally manipulated by removing the background in order to unite singlearchitectural images and ideas with the photography. This approach can enable the transformation of an underground car park entrance to a house on the beach, a spa, or even a normal entrance to a museum quarter.

5. Conclusion

Architectural Montages encourage us to question our perception of everyday life and our environment by taking the time to look at them. I am interested in how the existing man-made reality, i.e., architecture, is absorbed and transformed, how contrasts arise and ultimately influence our perception. Like a passage linking several themes to question the tension between the familiar and the unknown, the work should be seen as an insightful reflection on the age of permanent change and contradictions. There are always two possibilities at the end of each *montage*: Either it fails, or the *montage* reveals a fruitful analogy. Something not previously thought of appears.[19]

Through the minimal interventions shown, knowledge could grow through specific spatial perception. We can get new interpretations of an architectural object or spatial situation in terms of materiality, meaning, or context, and without conveying any fixed message. *Architectural montage* enables us to emphasize our own perspectives on an object or to sharpen elements that are normally hidden from the viewer.

For me, the fragmented perception of our environment, which arises from the speed and volume of image consumption, is an essential object of architecture and its multitude of constructions of reality. My research motivation for the discussion is that the perception of our everyday spaces and the effects of image production are increasingly becoming the subject of architectural debates.

"In the gap between the accepted representation and the new recording, photography redeems itself by yielding this other image, opening up the infinite possibilities of perception." [20]

Notes

1. Calvino, Italo (1988). Six Memos of the next millennium, Harvard University Press, Cambridge, Massachusetts. S.57
2 Linke, Armin (2018). Photography can challenge the power of such representations [buildings] by bringing out their inherent glitches, small cracks and everyday ambiguities. It can reprogramme architecture." in: Accattone Nr. 5. Brussels
3. Luigi Ghirri from his essay: Still-Life, Milan 1979
4. It should be mentioned briefly, that since the 1990s humanities and cultural studies discuss a non-territorial articulation space by mixing and superimposing divers systems of cultural signs. A Thirdspace between cultures. This concept is tied back to the concrete experience of migration and global nomadism and is closely linked to the associated problems of cultural identity constructions in the post-colonial as well as in the globalized world. Despite a high level of interest in both terms hybridity and Thirdspace, developed in intercultural theories of Homi K. Bhaba and Edward Soja, I would like to use the term here exclusively for a methodological impulse for perceiving and thinking about architecture.
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7. Without dragging these relationships into the present framework, I suggest Marina Spunta's essay “A magical experience between opposites” for further information. Spunta, Marina. (2014), "A magical balance of opposites": Reading Luigi Ghirri’s photography through Walter Benjamin’, Journal of Italian Cinema & Media Studies 2: 2, pp. 215–235
8. see: Ghirri, Luigi. Luigi Ghirri, Case Publishing, Tokyo 2017
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15. Barthes, Roland (1966). Die strukturalistische Tätigkeit von, Kursbuch 5, Mai 1966, pp. 190-196
16. Foucault, Michel (1967). Andere Räume, deutsch von Walter Reiter, in: Aisthesis.
Wahrnehmung heute oder Perspektiven einer anderen Ästhetik, Leipzig 19991, p. 39.
17. Frederiksen, Martin Demant (2018). An Anthropology of Nothing in Particular. London 2018
18. Florschütz, Inez (2015). Orte Erinnern - App des NS Dokumentationszentrums München
19. Didi-Huberman, Georges. Experimenter pour voir / Experimentieren um zu sehen von, www.dgae.de/wp-content/uploads/2011/09/Didi-Huberman
20. Luigi Ghirri, Still-Life, Milan 1979

Image Captions

Fig. 1. Luigi Ghirri, Paris 1977. © Eredi di Luigi Ghirri
Fig. 2. left to right: IR 590 - ISO 250 - 5.5; IR 720 - ISO 250 - 5.5; IR Chrom - ISO 100 - 4.5. © Christopher Schmollinger
Fig. 3. Ehem. Kaserne: SS Verfügungsgruppe. Today: Police Station Munich-Giesing. © Philippe Bareiss
Fig. 4. Modells. Unorte. © Philippe Bareiss
Fig. 5. Raumstudie IMG_0128. © Egzon Musa

Acknowledgements

I would like to thank the following Students: Philippe Bareiss, Leonard Leisering, Egzon Musa and Christopher Schmollinger.

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Biography

Maximilian Treiber studied architecture at the Münster School of Architecture and the Technical University Berlin. He has been working in several architecture offices in Tokyo, Zurich, Berlin and lecturing in the field of architectural theory and history at Bochum University of Applied Sciences. Since September 2019 he is has been supervising as a research assistant at the Chair Architectural Design and Conception at the Technical University of Munich. He is enrolled in a Doctorate Program, where he examines the technique of spatial montage as well as temporary spatial shifts and relocations of architectural fragments. He has published papers in academic journals, exhibited his design-based research and collaborates from time to time with other architects. He lives and works in Munich.

Grandjean de Montigny Manor and Canoas House:
A Viewpoint

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Abstract

Analyzing modern architecture based on classical solutions, such as Colin Rowe's approximation between the *Villas* Stein (Le Corbusier, 1927) and Malcontenta (Palladio, 1550/1560) indicates a vector that goes from the classical towards the modern. In this paper, the orientation of this vector is reversed, and Niemeyer's solutions serve as a starting point to interpret Montigny's neoclassical architecture in Brazil. What are its peculiarities and why do they occur?

The research identifies a lack of parallels in the Neoclassical canon for the base-object relation seen in Grandjean de Montigny Manor. In an anachronistic maneuver, we suggest a possible relationship made from Niemeyer's Canoas House. It takes into account the similarity between typological aspects, as well as formal solutions adopted by Montigny in the architectural elements of his manor, especially in regards to the free association between its columns and Canoas' pilotis.

This argument structures itself around the notion of *difficult form*, which Rodrigo Naves has identified in his analysis of Brazilian visual arts since the arrival of the 1816 French Mission. Naves allows us to elucidate possible consequences that also affect architecture. We operate through drawings of the two houses in question to clarify this point of view.

Keywords: Montigny, Niemeyer, Brazilian architecture.

1. Introduction

In *The Mathematics of the Ideal Villa* (1947), Colin Rowe proposes a vector that goes from Classical to Modern. Analyzing Villa Stein's modern architecture through geometric similarities and differences to Palladio's Malcontenta, Rowe identifies Renaissance's mannerist-humanist project at the center of the modern movement (SOMOL,1999,p.11). Thus, he consolidates a narrative where Modernism, as it breaks with the past, maintains a hidden — yet undeniable — connection with it.

In the Brazilian context, Lucio Costa takes a similar approach in his comparison between the main house of *Fazenda* Colubandê[1], an example of Brazilian eighteenth-century colonial architecture; and Oscar Niemeyer's 1957 Alvorada Palace, the presidential residence in Brasília. Through casual drawings on a 1961 letter from the University of Ohio[2], Costa identified a sense of evolutionary continuity that occurs in his publications since at least 1937[3]. Paulo Santos confirms this in *Quatro Séculos de Arquitetura* (1977), referring to Alvorada Palace as having "an indefinably Brazilian *je ne sais quois*"[4] (SANTOS, 1977, apud SANCHEZ, 2004, p.341-342).

Costa's look at the past aligns Brazil's Modernist narrative to Colin Rowe's analysis, adding a search for national identity. It concerns the rediscovery of a *genuine* Brazilian architecture, free and with genesis in colonial styles. In this narrative, the Neoclassicism established by Grandjean de Montigny and the French Mission of 1816 is an imported, violent, limiting interruption. As we invert the vector from Brazilian Modernism towards Montigny's work, similarities appear between Canoas House and Grandjean de Montigny Manor; neither sober Modernism nor Neoclassicism, but both have something indefinably Brazilian.

Validating Brazilian Modernism as the heir to colonial expression involves the establishment of formal relationships between these architectures. Because the narrative legitimizes Alvorada, it qualifies Colubandê as a relevant expression and brings both together. The drawing, although oriented towards modern design as an object of analysis, is bidirectional and does not always need direct inspiration; drawing allows the form's potential to indicate forces of its emergence. This example is powerful and allows us to recognize characteristics we identify with a "difficult form" (NAVES, 1999), somehow present in the analyzed works and rooted in the same indefinable Brazilianness Paulo Santos talks about in his book.

Inverting the vector of analysis can generate interesting understandings about the historical *parti*: It allows the visual strength of their relationships to modern strategies evidence forgot pioneering gestures. There is a potential to requalify *parti* that is not well understood in the juxtaposition of their precedents. The manor house Grandjean de Montigny built for himself in Rio, for example, has a *parti* whose diverse formal character is reinforced by several authors. Mário Torres perceives it as an amalgam between local and foreign currents, however, points out that "[...] their encounter does not generate the synthesis that a well-done work imposes" (TORRES, 1979, p.90).

A form of difficult comprehension is evident, diverging even from other projects carried out by Montigny in Brazil. If this synthesis is lacking among precedents, the inversion allows us to look for it in Modernism. On the other side of the forest, we see the very Brazilian Casa Canoas as an opportunity, as both share several gestures that are not obvious at first glance. To establish connections is more than enough to requalify Montigny in the face of a narrative that excludes him, but understanding how these architects solve the residence in Rio's landscape.

2. Montigny and the Neoclassical movement

Neoclassicism became established at the end of the 18th century as the cultural arm of the French Revolution. To understand Auguste Henri Victor Grandjean de Montigny — a French neoclassicist — is to contextualize him among the sociopolitical changes his school promotes and reflects. Montigny was born in Paris, on the 15th of July 1776. A distinguished student of Charles Percier and Pierre Fontaine started his education at the École d'Architecture just three years after Louis XVI's execution.

At the cutting edge of Neoclassicism, the École was a place where new theories and remarkable projects spread: the latticed composition of J. L. Durand; the colossal classicism of Boullée, Ledoux, and many others. Montigny's early work reflected these ideas, awarding him a *Prix de Rome* for its excellence — the greatest honor for a young architect at his time. Montigny then travels to a vibrant Italy, a place where discoveries about antiquity are dug up every day in Pompeii and Herculaneum. When he returns, he finds a new France in reconstruction, a *Napoleonic* France, full of opportunities.

During his early years as an architect, Montigny pursued an ideal of neoclassicist: Competing for Paris grand reforms, sought to build a civic, edifying architecture for humankind. Although never built, these projects created him a reputation among Parisian architects and the Bonapartes. Napoleon's brother, the new king of Westphalia Jérôme Bonaparte, designates Montigny as his first architect. The architect then moves to Kassel, in modern-day Germany, where he designs and renovates palaces for the Napoleonic government.

In the realm of Visual Arts, the Empire favors another neoclassicist: Jacques-Louis David's nephew and apprentice, Jean-Baptiste Debret. Painter of Napoleon's battles and triumphs, Debret's edifying military scenes, and historicist works had a neoclassical character that served ideological purposes. The neoclassical form legitimized the Empire by associating current history with the idealized antiquity of Rome, seen in Debret's *Regulus partant pour Carthage* (1791).

This aesthetic transposition between ancient and current events is made possible by a didactic moralism. It aligns society with revolutionary values, themselves inspired by the Roman Republic, and legitimizes the expanding French Empire as a legitimate heir to Rome's greatness. This occurred regardless of classical values and aesthetic being factual, misconstrued, or even false ideas about ancient history. French Neoclassicism was the maintenance of revolutionary promises, inspiring civic values, and moral principles. It could also be imperialistic, sometimes indistinguishable from propaganda. Both faces of its mixed legacy, however, worked on a realm of great moral idealism.

But promises of imperial glory were short-lived, blown away in the storm of neverending revolutions. Artists took a heavy toll upon Napoleon's defeat, as the Bourbon status quo had nothing to do with the revolutionary *intelligentsia*. Removed from Louvre's curatorship, Jacobin revolutionary Joachim Lebreton was exiled in Brazil with Montigny, Debret, and other "undesirable" artists in what would be known as the *French Artistic Mission of 1816*. Upon arrival, the also exiled Braganza court posed an ideological crisis: Brazil's theocratic monarchy, full of slaves, represented everything missionaries fought so hard to destroy during the revolutionary years.

3. Montigny, Debret, and the difficult form

A Brazilian reality defies the neoclassical ideals in Debret's work, which gradually abandons the edifying medium of oil painting for anthropological watercolors that center around everyday life in the tropics and where a transformed representation is perceived (Naves, 2011). According to Naves, the neoclassical form becomes impossible to translate in a slave society where no one offers a basis to support its moralizing formalism. If the Crown's dignifying expectations fell short as it required a certain fakeness from the artist, the watercolors allowed Debret to achieve greater freedom through its speed and chronicle. This new reactionary form became ambiguous and tense in what Naves calls a *difficult form*.

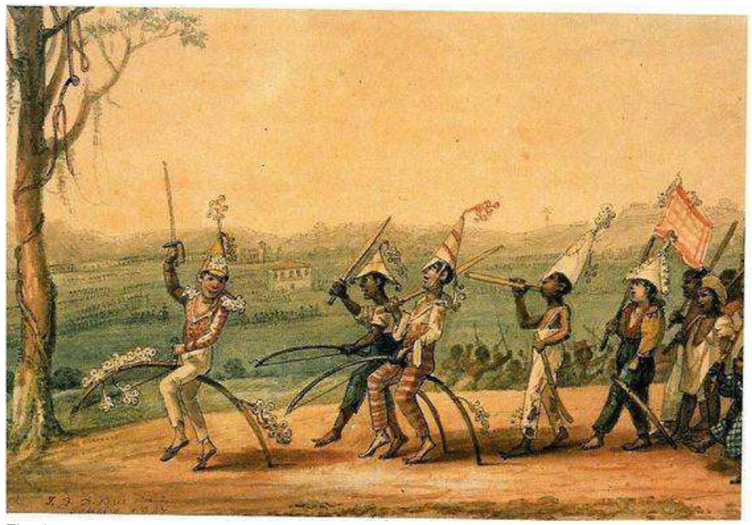


Fig. 1

The reproduction of Debret's *Le premier élan de la vertu guerrière* (Fig. 1) seems to evoke in its title the edifying themes of neoclassical works. However, *"when we look for the title's promises in the watercolor, the comparison is baffling. A group of poor boys - black, white, and mulatto - seeks to reproduce what would be a solemn parade"* (NAVES, 2011.p.42). First of all, it seems relevant for us to highlight a game of incipient forces in the composition structure shown by Naves, as well as the idea that the figures are *"free from a plot that magnetizes them as a force"* (Idem, p.43). Secondly, the dilution of the marked contour and tenuous background that Naves develops throughout his analysis and gives a kind of charming naivety to the watercolor. Thus, "difficult form" would therefore be a reckoning between Debret's neoclassical formation and its confrontation with the realities of everyday life in Brazil, where the myth of the mild Portuguese colonizer has sweetened unequal relations since

the colonial times. Furthermore, considering Debret's neoclassical background, Naves clarifies what seems to be definitive: "Formal idealities would not know how to deal with a reality totally foreign to their assumptions" (NAVES, 2011. p. 44).

In the context of Grandjean de Montigny's architecture, what appeared to be a blank canvas for Boullée-like compositions were, in fact, a challenge of precarity. Besides fewer resources and inferior technology, slave labor wasn't fit to supply the high technical level of craftsmanship large neoclassical structures demanded. His surviving drawings and writings show how many of his public and private commissions were full of expectations to deliver such architecture, and how difficult it was for him to build those projects in Brazil.

His royal commissions to a Senate, the National Library, and various urban reforms never are built. Most got demolished from what did, including his faithfully neoclassical Academy of Fine Arts, turned into a parking lot. However, two large buildings survive to posterity: The Commerce Plaza, a civic-mercantile building, and his residence at Gávea. In the latter, confronted by the lush nature and landscape, Montigny profiles architecture with a difficult form.

4. The Manor

The architect's residence is the challenge of freedom, where he can manifest the poetic and lyrical ideals he wishes to generalize for the world. In the rainforest, Grandjean de Montigny discovered them away from the official expectations from which he built a career. His manor project starts in a type of french residential plan used in one of his commissions for Jérôme Bonaparte (TORRES, 1979, p.82). The *plan massé*, named after its concentrated external shape similar to a square or isolated mass, has been known since the 18th century as characteristic to *folies* or *bagatelles*: small palaces of leisure — and pleasure — for aristocrats and their mistresses. After the revolution, this type assumes a new significance in the bourgeois elite's mansions, adapting easily to a more centered and intimate society. Montigny certainly took inspiration from Bélanger's Château de Bagatelle (1777) and especially Henry's Hôtel Lakanal (1797) for his project in Kassel, and now revisits them in a new context.

The tropical surroundings, however, hindered his European dreams, as its geography could not be more different from what Bélanger found in the Bois de Boulogne. Rio's landscape dwarves everything built below its monolithic mountains, and Montigny first has to overcome a topographic challenge. Intuitively, instead of flattening the sloped terrain, he chooses also to accentuate a part of its acclivity. It allows the house to be on top of a built topography of natural character, where landscaping uses native species to open visuals and trails that mingle with the rainforest.

In the resulting slope, Montigny establishes a habitable cellar, reminiscent of terrazzos at Tuscan villas and the colonial farms of Rio de Janeiro. Over it, settles the residence's main volume in such a manner that, depending on where it's seen, it has two or three apparent levels. Unlike its precedents, however, this main volume does not completely detach from the site and prefers to reconcile two different levels. In a way, it creates a transition between natural and architectural space, which elevates the residence above trees to a prodigious view of the Rodrigo de Freitas Lagoon.



Fig. 2

A strong relationship with the lagoon and its landscape appears in formal-functional choices. The French plan, composed from the union of simple geometries in the manner or Durand, suffers an inversion in the hierarchy of its spaces: While a bagatelle's main salon is towards its rear garden, Montigny orients his living room towards the front, surrounded by his verandas. There is a logic inversion in the french dwelling, as its rear *English* garden becomes somewhat secondary in the overall composition.

The Doric semi-peristyle in Montigny Manor's verandas has no ornaments besides a discreet and functional cornice, reminiscing a Pompeiian vernacular with the essence of classical elements. A Greek lack of superposed orders creates a sense of structural truth, where the stocky columns of the base support more graceful ones on the floor above. What seems like an exaggerated diminution — especially from the manor's main perspective, just below the terrace stairs — is the visualization of its weight transfer dissipated by the fat, "shoeless" columns. Clinging to the red terracotta brick terrace, they are like feet of a giant *Abaporu* stepping in the red clay of colonial streets. The effect is one of light and shade, weight and lightness, where the whitewashed structural elements subsume the house itself in the rainforest.

In a way, there is an operation on Hôtel Lakanal: The small portico Henry uses to mark its entrance Montigny extrudes, creating the living room area from which the verandas spread. Where the house sees the lagoon landscape, Montigny relaxes the concentrated plan, rational and intimate, to create a lyrical, stripped, and inviting architecture. From front to back, you can see the French bagatelle deconstructing its opaque typology into permeable relaxation.

While the front façade is open, Montigny Manor rear remains more faithful to a *plan massé's* closed aspect. The traction generated by this diverse formal character, exactly which Mário Torres attributes to a lack of satisfactory synthesis (TORRES, 1979, p.90), results from an adaptive typological operation, not mere aesthetic interference among conflicting neoclassical currents. It somewhat resembles Naves' observations about Debret's scenes in which there is a “meek balance trapped in a game of very incipient forces, unable to produce stability resulting from a powerful game of forces” (NAVES, 2011. p. 43). This meek balance, to an extent contradictory, demonstrates the operation of a difficult form that touts assumptions of a Neoclassicism no longer valid, but still present; and the reality of its exuberant site and the lustful life found in Brazilian lands.

Thus, formal and typological differences do not arise from negligence but assemblages. Montigny Manor is as erudite as its architect, that knows how and when to subvert and manipulate neoclassical language. In the possibilities of load-bearing masonry, Montigny achieves openness and simplicity that differs from colonial *fazendas* like Colubandê: His manor's lyrical architecture has the intellectual weight of the profession, its praxis, and theory. Being an architect in Brazil is a project in which foundations are his, the grand project he built as an educator at the Academy of Fine Arts — one of the first Architecture courses in the American continent.

Since the difficult understanding of Montigny Manor could have originated in transformative operations over an imported type, it challenges Mário Torre's assumptions about a conflicting formal character.

5. The Canoas

To build his house in São Conrado, far from Grandjean de Montigny Manor by unsurmountable mountains, Oscar Niemeyer transforms Corbusian rationality. Where Dom-Ino House is rational, contained, and replicable, Canoas House makes it lyrical, expansive, and site-specific. Such freedom that reacts and responds to its surroundings inserts Canoas in Brazilian Modernist narrative as the height of its residential architecture, an erudite convergence of Brazilian natural and cultural expressions. Comas and Peixoto understand its typology primarily from two other approaches to the suburban villa in the Americas: The impersonal Farnsworth House that manifests as an "almost nothing" and Wright's Fallingwater, which simulates and amplifies its surrounding landscape.

When the topographic challenge faced by Montigny appears a century later to Niemeyer, he prefers to interfere in a controlled manner, embracing the surroundings with a terrace that makes Canoas House as site-specific as Fallingwater (COMAS, 1999, p.34). It is an artificial forest clearing, with private areas under and a social pavilion on top. From its main entrance, the Canoas’ social pavilion appears to be the only level in a base-object arrangement similar to what is seen at Montigny Manor. Niemeyer's house not only simulates topography but transforms it throughout the process, creating a frontier that delimits architecture from natural space.



Fig.3

In that clearing, Comas and Peixoto point to a relationship between Canoas' tear-shaped pool and Botafogo Bay (Comas and Peixoto, 2019, p.4) that could easily be pertinent to Rodrigo de Freitas Lagoon as well. Seen from its social pavilion, the objective relationship to Rio's landscape and the ocean’s openness contrasts the subjective lake, the oasis, that is its pool and parallels to what Montigny established towards Rodrigo de Freitas Lagoon in his Manor. Both houses, however, are guided and opened by these relationships with the local aquatic landscapes.

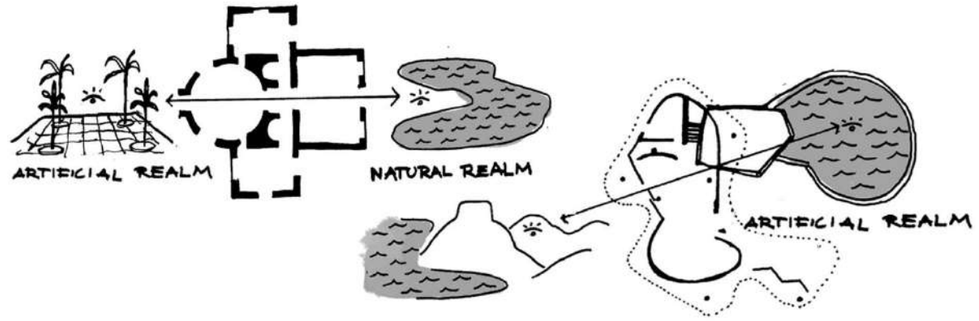


Fig. 4

There is traction on both houses. In Montigny Manor, it happens between the opaque and permeable generated by its axial stretching of the *plan massé*. In Casa Canoas, it is complete and binuclear like a cell about to divide. Niemeyer allows the landscape to be seen, using window walls between the concave nuclei that conform Canoas' living and dining areas. Montigny also addresses binuclearity in these spaces: Across his Manor's axis, the round mass of its dining salon contrasts with the main living room’s openness. Both are connected by an enfilade, allowing a linear visual continuity throughout the building. Montigny tweaks the *plan massé* by displacing the main staircase from central alignment. A connexion between the lagoon landscape and the manor’s backyard English garden opposes natural and human realms.

With a Baroque spirit, Niemeyer uses light and shade to create Canoas House. Under the sun, thin black *pilotis* support a monolithic coverage over the social pavilion, disappearing on its projected shadows to float and the house, hidden, become an "almost nothing" *a la* Farnsworth. In Montigny Manor, a similar dynamic happens horizontally as the roof and its main volume disappears behind white Doric columns. Montigny could only dream of Niemeyer's structural liberty, but we can see from Canoas House how the manor's load-bearing masonry looks open and light.

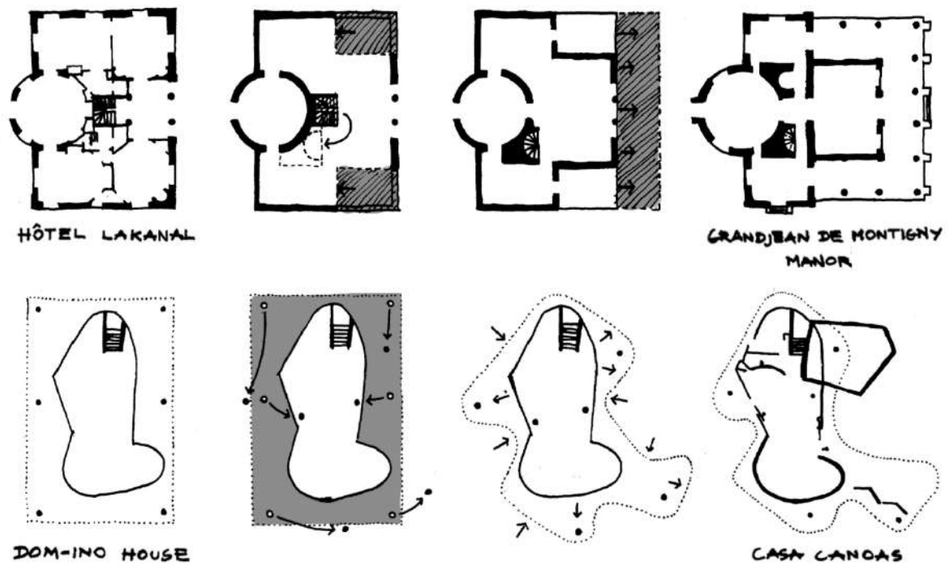


Fig. 5

Montigny's semi-peristyle explodes in Niemeyer, whose free plan allows previously restricted columns to drift freely inside and outside the house. Light in Grandjean de Montigny Manor makes the structural element a concealer, in Canoas House, concealed. The act of spreading Montigny operates in typology, Niemeyer does in a structural system. Both result in stripped, inviting lyrical structures that emerge from cold cartesian precedents. If Canoas House is a convergence at the end of Brazil's Modernist narrative, pertinence to Grandjean de Montigny Manor is a case for seeing Montigny's work as an intermediate link in the evolution of Brazilian architectural expression.

6. Conclusion

In the relationships we seek to demonstrate, parallels emerge between the *parti pris* of Casa Canoas and Grandjean de Montigny Manor. As solutions to the suburban villa in Rio, relevance towards one another shows the genesis of Brazilian lyrical expression already present in Montigny Manor.

There is also a synthesis satisfying the problem proposed by Mário Torres, in which design choices and gestures show not a mere juxtaposition of inert currents, but vigorous reaction. From these, only the new ought to be born — even if it doesn't happen again. Casa Canoas itself received criticism from Walter Gropius and Max-Bill (HERBST, 2016, p.67) for its non-replicability. If Colubandê has modernity due to a gestural and aesthetic relevance to Alvorada Palace's elevation, there are even more reasons to attribute incredible modernity to Montigny Manor's aesthetic, spatial, and intellectual parallels to Casa Canoas.

Anthropophagy of European precedents created an architecture neither baroque nor satisfactorily neoclassical, balanced amid a particular oscillation. The departure from colonial *fazendas* and French *bagatelles* foreshadows gestures of Brazilian Modernism, and we insert Montigny as a missing link amid two periods: a one-note samba to play in Lucio Costa's narrative hiatus, which renegades neoclassical and eclectic styles as valid expressions for Brazil's identity. Montigny Manor is indeed a work of exception but could not be more characteristic to its creator: It synthesizes Montigny's lyrical, historical, and aesthetic knowledge as an architect.

Through drawing and comparative arguments, we tried to lay the groundwork for requalifying Grandjean de Montigny Manor in Brazilian Architecture on what we identified as a particular oscillation, or perhaps retreat, in which understanding, and quality converge. Likewise, this oscillation — or *difficult form* — relativizes Casa Canoas' myth of imaginative freedom by highlighting aspects of containment characteristic of this reckoning architecture with Brazil. The article adds to a set of studies on Montigny a reconciliation to a narrative in which he belongs but remains on the sidelines.

Notes

1 At Fazenda Colubandê and Alvorada Palace, the typological arrangement has a main body - the main house, the Palace - and adjacent chapel. In addition to a "(…) *je ne sais quois* indefinably Brazilian (…)", as Paulo Ferreira Santos (1977) points out.
2 The letter from February 22, 1961, with Costa's sketches is available at http://www.jobim.org/lucio/handle/2010.3/4510
3 We refer to *Necessary Documentation*, an article originally published in 1937, in the "National Historical and Artistic Heritage Service" journal of the Ministry of Education and Culture. We accessed the publication in *Lucio Costa: Sobre Arquitetura*, 1962.
4 "And the Palácio da Alvorada in Brasília itself, despite the differences in style, belongs to the Columbandê lineage (of Niemeyer's intimacy, who is a connoisseur of our architecture from the Colonial times, of which he organized several exhibitions at the request of Rodrigo Melo Franco): the same serene grandeur, the same blatant nobility, and an indefinably Brazilian not-know-what, proving that spirit is more than form; It is he who, overcoming the ephemeral contingencies of each moment in the history of peoples, perpetuates in time the constants of national sensitivity. "(SANTOS, 1977, pp 103-104).
5 *Abaporu* (1928) is an oil by Tarsila do Amaral with which the artist presented Oswald de Andrade. From this meeting, the work's name was born, which means "anthropophagous" in Tupi-Guarani. Around this work that the *Manifesto Antropofágico*, the Brazilian movement of the same name, organizes. http://enciclopedia.itaucultural.org.br/termo74/antropofagia

Image Captions

Fig. 1. Jean-Baptiste Debret, *Le premier élan de la vertu guerrière*, 1827, watercolor on paper, Castro Maya Museums, Rio de Janeiro, https://rodrigovivas.files.wordpress.com/2014/04/naves.jpg.
Fig. 2. Left. Drawing of Montigny Manor's front view from ground level. Center. Back of the main volume seen from the terrace level. Right. A closer look at the verandas and their Doric columns. (Drawings made by Menezes Filho, J.C., 2020).
Fig. 3. Left. Drawing of Canoas House front view from terrace level. Center. Back of the kitchen and dining room nucleus are seen from the terrace level. Right. A closer look at Canoas House pilotis. (Drawings made by Menezes Filho, J.C., 2020).
Fig. 4. Diagram comparing Canoas House and Montigny Manor visual axis and their relation towards the natural and artificial landscapes. (Drawing made by Menezes Filho, J.C., 2020).
Fig. 5. Diagram of the spatial relaxation that occurs in Montigny Manor and Canoas House, starting from their European precedents. (Drawing made by Menezes Filho, J.C., 2020).

Biography

Julio Cesar de Araujo Menezes Filho is an undergraduate researcher on socio-spatial pattern tools for urban planning, Brazilian architecture, and architecture criticism at UFRGS College of Architecture (Porto Alegre, Brazil). Former undergraduate in Civil Engineering at the University Of Illinois (Urbana-Champaign, USA, 2015-2016), Julio developed his interest in Architecture History and Neoclassicism during a scholarship program at the Institute of Classical Architecture & Art (New York, USA, 2016). Abroad, worked on academic and humanitarian projects in South Africa and Mali.

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The two faces of Janus of the Peter Eisenman's House I

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Abstract

Since the 60s, when Peter Eisenman began his career as an architect, he has made relevant contributions to the discussion and criticism of Architecture. Over the years, Eisenman approached different theoretical references such as: the formalism of Colin Rowe, the structuralism of Noam Chomsky, and the deconstruction of Jacques Derrida. Some of his projects are in moments of transition between different references. His project “House I” from 1967 was developed between Eisenman’s thesis defense in Cambridge “The Formal Basis of Modern Architecture” (1963) and his texts from the beginning of the 1970s in which he exposes his conceptual architecture: “Dall’Oggetto alla Relazionalità” (1970), “Notes on Conceptual Architecture” (1970) and “From Object to Relationship II” (1971). Opposing readings of House I from those two moments allow us to see the object beyond these narrative possibilities.

Based on what is exposed in these texts, we will explore House I two faces of Janus: one based on the thesis, and the other on its conceptual architecture. From his thesis we will observe this project form as a reflection of an external vector, resolved internally by a spiral, at the same time that based on his conceptual architecture, this same project could be seen as the result of the diagonal displacement between two squares.

Considering the duality of his work, we can see how “House I” contributes to the discussion that Eisenman inaugurates in his thesis and allows reflections that leaded the architect to his conceptual Architecture. The irreducibility of the “House I” to any of these readings allows the observation of the way Eisenman discusses the autonomy of Architecture, based on the autonomy of the object. The architect’s references to Palladio and Terragni and how this project influences his subsequent houses, facilitates his interpretation in a formal sequence. Concept lend from George Kubler.

Keywords: Peter Eisenman, Formalism, Contemporary Architecture, Architectural Theory, formal sequences.

1. Introduction, Eisenman's House I

Since the beginning of his career in the 1960s, Eisenman presents a vast corpus of projects, texts, expositions, and other institutional commitments. Upon this, we will return to the beginning, the House I project, looking at it as what Eisenman names as canonical building, “[…] which requires a reading forward to what the building inspired, as well as backward to what the building denoted.”[1] We can trace back to the first time Eisenman exposed the House I to the CASE of 1969, which originated the book Five Architects, in which he shows the House I, project in 1967, and House II, in 1969, along with explanatory texts. This agglutination on the exposition starts what would be his houses series. In 1982, the architect wrote the book House X, where the full series of houses projects appear. Eisenman characterizes those projects by the formal experimentation upon transformations of a cube, conditioning how his projects are read. Different readings of Eisenman’s career place House I as the first of his Transformations, the series of houses spamming from it to the House X, 1975. Authors like Moneo, Jencks, Montaner, or Hays look at Eisenman career from this optic, grouping those projects under the Transformation banner, as an autonomous formal study, coinciding form with the process. Study that ends with the House X, when his Decompositions period begins and his formal autonomy would look to the site.

Even though the connection between those houses is indisputable, some texts of the architect show fractures. Cardboard Architecture, 1973, and House VI, 1977, both before House X publication, indicate an internal change: the first four houses would be transformations of the same cube, so between House IV and VI Eisenman “changes the cube”. Analyzing the House I, we found clues to what this first cube is, and where Eisenman found it. We will approach the project like Guido Zuliani, who, in the text Evidence of Things Unseen, takes the “House I” not as a start, but as a connection, a point between Eisenman’s references and his projects. The project is seen not as a start point, but an inflection. A posture like one Stan Allen points out Eisenman do:

“[where] rather than confront a fully realized, mature masterwork, it is often the early work, or the slightly marginal and unresolved aspects of the mature work, that offer a kind of handhold, or a crack to open up the field, and clear space for working.”[2]

Eisenman published in 1999 the Diagram Diaries, in which he recapitulates his entire career corroborating the idea of a series of houses, punctuating a changing point between the House X, 1975, and the Cannaregio project, 1978. This point divides the Transformations and the Decompositions, named in this book as the diagrams of interiority and the diagrams of exteriority respectively. He also points to a behind the House I as he defines the diagrams of anteriority, “[…] the accumulated knowledge of all previous architecture”[3]. His studies before the House I, like his thesis - The Formal Basis of Modern Architecture, defended in Cambridge in 1963 – can be seen as this anteriority, as Moneo also noted[4]. Somol, introducing that book, says it’s like a preface to the unpublished thesis[5], corroborating its relevance in Eisenman’s anteriority. Since 2006, when Lars Muller Publishing published the thesis as a fac-simile, it appeared in works like the cited Zuliani’s or Gabriela Izar’s Diagramática. Both use it to trace a continuity of his diagrams and analysis forms from before the House I and his subsequent projects. As Eisenman says in the thesis afterward: "Perhaps now, history will overcome the flawed writing and the underdeveloped ideas to reveal the value of this early work to my later career.[6]

Upon this, we can see the House I as Janus with his two faces looking at opposite sides of time. One stare at what would become it, the diagrams of anteriority, the other at what the project became, the diagrams of interiority. The repetition of the term *diagram* suggests a continuity, differ what “fills” those diagrams. Diagram as a permanence attests continuity of the way Eisenman reads the form: not only a drawing technique but a tool simultaneously analytical and generative. In his thesis, Eisenman dissects with diagrams the form of eight projects from four architects - Aalto, Wright, Le Corbusier, and Terragni. Diagrams that are clearly related to a formal tradition, to the ones of Rowe and Wittkower. Besides the contact between Eisenman and Rowe, while the former was in Cambridge, Rowe’s and Wittkower’s influence are attested by Eisenman himself[7]. Impregnated in Eisenman’s thesis, diagrams mark how he understands the architectural space, a fundamental way that would accompany him in his House I and throughout his career. In synthesis, the architectonic forms - walls, planes, voids - are positive or negative volumes – there isn’t “emptiness” -, which could be juxtaposed or interpenetrated.

About the differences, the anteriority roughly refers to history, the knowledge brought from the past. It’s the architect digesting history, absorbing its forms. For Eisenman, it’s Terragni, Corbusier, and Palladio. The interiority refers to what the project is, “[…] a potentially autonomous condition that is not already socialized or that is not already historicized.”[8] It’s the self-referential form, as his houses series, where Eisenman exercises an architectural autonomy by closing the objects in themselves, making the formal process the product. Those two moments aren’t rigid, as if Eisenman first studied and then applied. It’s

a framework based on the Diagram Diaries, those operations imbricate each other. Eisenman has studied Terragni over his entire career, Palladio is present even in 2012 with the Palladio Virtuel exposition.

Bringing this framework to the architect's production of the period, we find this difference in other terms, on Eisenman's theoretical base. As for the diagrams of anteriority, in his thesis Eisenman comprehend architecture as an intervention in the total order. He argues that modern architecture had been failing because it couldn't give order to a distended social environment, pending to the historical and technical, forgetting the critical side, the form, as a consequence. As result, a disjunction occurs; the subjects becomes lost in the environment while the architecture closes itself in mannerisms. Total order denotes an absolute, from which emerges a platonic dichotomy, the generic and the specific. The specific - interventions, forms - must relate to the total order, the generic. This leads to a hierarchy of the architectonical elements: form, the architecture per se, followed by intention, function, structure, and technique. The most important at this point is the all-encompassing absolute of the total order: every element exists with respect to it. The architectural product, its object, is a resolution of internal, specific, and external, generic, requirements in relation to this order.

In the same year of the thesis, 1963, Eisenman published the text Towards an Understand of Form, where he exposed some of his thesis premises. After those, there's a hiatus, the next texts would appear only in 1970 - a year after the House I -, Notes on Conceptual Architecture and Dall'Ogetto alla Relazionalità. Those together with the From Object to Relationship II, 1971, forms what can be considered the theoretical basis of Eisenman's early diagrams of interiority, so from House I to House IV. They bring important changes, affecting the comprehension of the architectural object. Borrowing the categories of surface structure and deep structure from Noam Chomsky, Eisenman shatters the unity of the total order, bringing two parallel structures. Instead of an all-encompassing unity, where everything exists in a single hierarchy, those two structures can't be synthesized, they can only be put in relation to each other. The hierarchic generic-specific gives place to a parallel deep-surface.

In a way, Eisenman leverages an instrument important in his early discussions: ambiguity. Found on his Thesis in the mass-surface dialectic particularly present in Terragni's works. This dialectic was a way of treating volumes where one can't fix if it's mass or surface, sliding from one reading to another. A dialectic without synthesis forms instability. This ambiguity gains space as the fulcrum of the system as it goes from the way to treat the volumes to the concept of the project itself, bringing consequences to what the architectural problem is, as the text title says, it changes "from object to relationship". If before the architect's work had been to make the total environment clearer reassuring the generic demands, comprehending the project as an object in space, compounded with the environment, then the work was to give access to the deep structure, the conceptual, by means of the surface structure, the perceived. The deep structure is within the object, not directly present to the senses; it's only accessible through a mental exercise upon the perceptions of the surface structure.

Besides changing the relationship between the architectural project and the environment, this also changes the relations with the user. If the form as the perceptual of the thesis and the surface structure are closely related, the generic or the deep structure, which orders them, aren't. The generic implies the existence of an order coming from an externality, the total environment, so the project form relates to this order, and its relation with the user are mediated by this environment encompassing both project and user. In his Transformations this link to the context is cut and internalized, the deep structure relates to the project itself, the formal process is ordered by its internal structure. Self-referential, rests to the user, placed aside, to perceive the form and, with their intellect, comprehend the formal order.

At this moment, the ambiguity is between the perceived and the conceptual, sliding from one to the other, one implying the other; the architect's work is its relations. Its product can be an edifice, a drawing, a model, whatever that can be organized, a surface structure, making relations to a deep structure. Change between those two moments is apparent in the text Dall'Ogetto alla Relazionalità, where Eisenman says a wall is like a canvas, waiting to be imprinted by the formal relations[9]. It's the opposite from the thesis, where a uniform wall, without flexions, would be the generic, unreachable, ideal.

2. The two faces of Janus of House I

Even though those two views diverge, House I form adheres to both. By means of the permanence, the diagrams, this project will take from one view to the other, an important step in this change. Inverting time, first we'll approach the face of House I from what Eisenman exposed of the project in the book Five Architects. He presents the form of the house as the result of a diagonal displacement between two cubes. This organizes both a system of frontal surfaces and one of diagonal volumes. He considers them as reciprocate, the diagonal results from the resolution of the two mesh directions and vice versa.

This is displayed in six isometrics organized in three pairs: the diagonal displacement of the two cubes, two plane sequences along the longitudinal axis, and a beam expressing the diagonal (Fig. 1). Those set of drawings don't have a strong connection. Comparing, the twenty-four drawings of the House II on the same book are much more coherent with Eisenman's Transformations - a step-by-step of the formal process -, which suggests that House I was aligned with House II in the exposition; the second dictated the reading of the first.

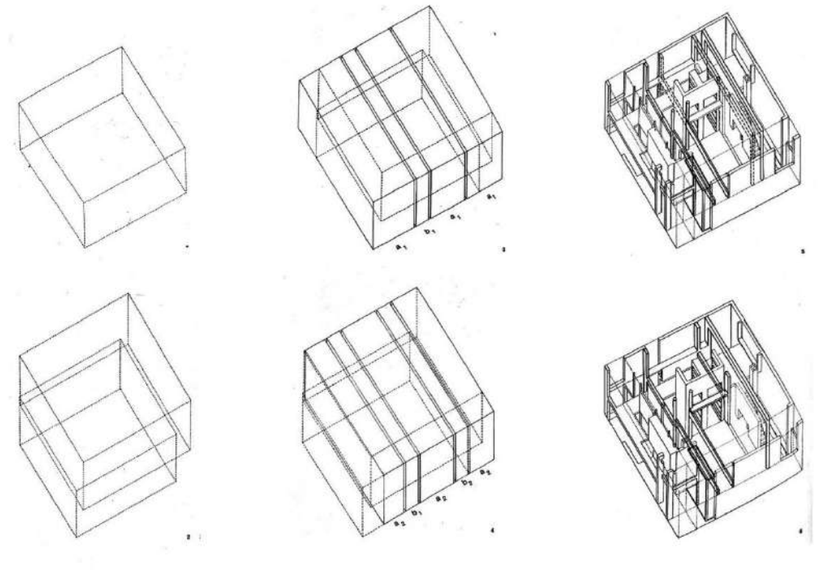


Fig.1

With the formal tools Eisenman exposed in his thesis we can expand those diagrams, filling some gaps between those pairs. From the diagonal movement of the two squares, we found the nine-square division on plan, as he identifies in Casa del Fascio. Like this, the diagram has frontal reference, the access marks from where the cube is divided into a series of volumetric planes, like a "pack of cards"[10] on the longitudinal axis. This "pack of cards" contains the isometric plane sequences, which marks a compression. By this compression we can find two volumes sliding in relation to each other. One volume is marked by the services volume and the stair to the first floor, ending in one plane of the longitudinal division of the nine-square. The other is marked by the recess at the back facade and one stair on the ground floor and a cut on the first floor, coinciding with the other longitudinal division of the nine-square. This dislodges between these volumes carries a beam, the same that Eisenman exposes as the diagonal, between two divisions of the nine-square. (Fig. 2) This shows the reciprocity in House I as a self-referent project; the same way the diagonal in the deep structure distorts the form making both the planar and the volumetric system, the surface structure, starting by the nine-square, leads to the diagonal. Both can be either cause or effect of the other, the project is closed in itself.

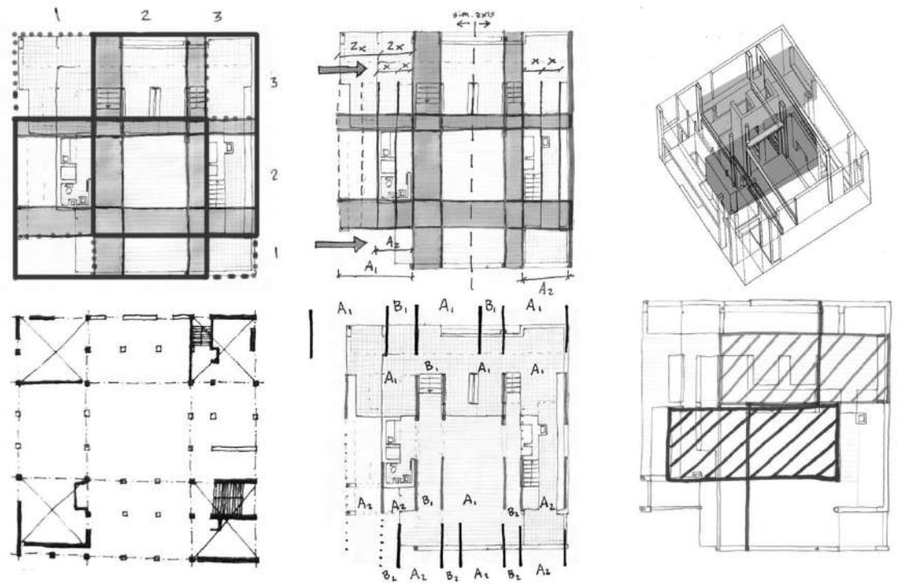


Fig. 2

The second face comes from the past. Considering the total order, the formal system cannot emerge from an arbitrary diagonal displacement. The project comprehended as the articulation of external and internal requirements defines that the starting point must be related to where it's placed. The drawings of this mentioned project from the Five Architects, the Diagram Diaries, or Eisenman's website, don't show anything besides the house. Nonetheless, photos of the house accuse its position adjacent to a pre-existence. Differently from the House II, isolated atop a hill, the House I cannot escape this adjacent building. The work of Gabriela Izar brings materials found in the Canadian Centre for Architecture and with a site plan of House I. The cube is located at the end of a "U" form, suggesting an external vector reaching it diagonally. The internal requisite derives from its conception and function. Despite the project's name, House I, its initial function was to be an annex for a toy collection, a museum. Eisenman stated that a museum doesn't have a specific type[11], it doesn't suggest a centroid or linear generic form. Another name of this project is Barenholtz Pavilion, so the internal formal requirement comes from the pavilion as a closing of the pre-existence, thus a centroid form.

We have an internal and external demand analogous to the present in Casa del Fascio analysis developed by Eisenman in his thesis: a centroid form, a cube, affected by a diagonal, linear, external vector. Like Terragni's project, Eisenman takes advantage of this condition to make a mass-surface dialectic. Following the architect's analysis of Terragni's project, the external vector affects the cube both ordering a plane system, slicing the cube as a series of volumetric planes on the longitudinal axis, the "pack of cards", and cutting its top half. This cut makes the vertical dimension smaller than the longitudinal and orthogonal ones, giving the elevation a linear characteristic, while the plan remains centroid. Remains to analyze the accommodation of this vector to the centroid form, the articulation of a single entrance on a square plan. In Casa del Fascio, it occurs by a volumetric system constituted of a series of planes that diminish the vector until the central courtyard, that operates as a stopping point. Even if House I entrance is affected by similar stopping planes, that's not the only reference. Eisenman elaborates a spiral similar to the one he found in Aalto's Saynatsalo Civic Centre.

The entrance position is important. In Casa del Fascio, it's centralized, aligned to the courtyard. On House I it isn't, like the Saynatsalo Civic Centre, it's dislocated. Aalto's courtyard is the closing of an external diagonal axis too, but by means of a spiral. Mobilizing the instruments present in his thesis, an analogous spiral becomes evident in House I. Eisenman mixes both references. There is a nine-square diagram, a tri-partite division like the architect reads in Casa del Fascio, forming two strong axes in both the orthogonal and the longitudinal direction. First, those traversing vectors weaken the external vector, as in Terragni, but the House I central void doesn't have the same stopping power. It weakens the vector a little more by its centroid form, like Aalto's. The undercut on the ground floor and the echelon formed

by this same undercut and the recessed column, make the external vector turn, directing it to the upward stair. Before reaching a centroid landing, another place of stopping, the vector passes by another axis of the nine-square. The end of the floor and the form extruded on the side gives the stopping and the next turn of the vector. A little echelon makes it go decentered. Next, it follows a stopping sequence, C-B-A, passing by volumes of reduced dimensions. After the last turn, the vector collides with the entrance. Its last force is consumed by a leakage to the center, attested by a little extrusion of the final landing. (Fig. 3) Leakage analogous to Saynatsalo Civic Centre one. Like Aalto's project, there are façades deformations by the force of the spiral. In a sense, the dislocated square, the diagonal dislodge, is the spiral pulling the side and the back of the building.

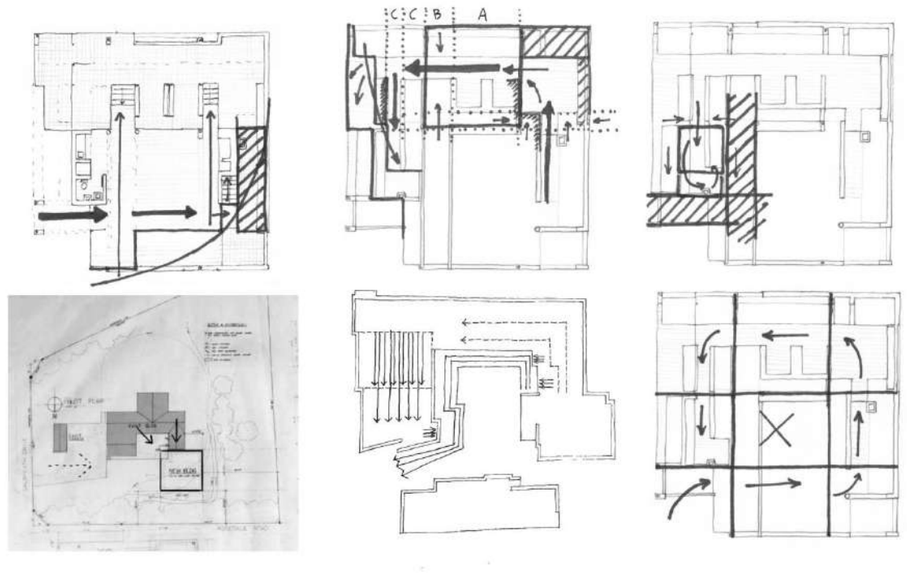


Fig. 3

Comparing both approximations of the House I shows one subtler difference: for House I by the House II forward the isometrics are an important way of comprehending the forms, but in House I as by the Thesis, the spiral is resolved on plan. Overlapping the spiral on the nine-square division, we found that this diagram regulates the movement: the central void, like the Saynatsalo Civic Centre courtyard, fixes the spiral center, the corners are the turns and the sides are straight movements (Fig. 3).

Regardless the project coincides better with one or other face, those readings allow us to see that the House I, as an object, exists beyond the discourses about it, even the Eisenman's ones: either of the explanatory type, like the presented in Five Architects, or the development one. Both analyses sketched here didn't touch the process of the House I development. What Eisenman says about his Terragni diagrams, "[…] these diagrams have been revised and redrawn so many times over the last thirty years, that rendering any assessment of their original state, is now somewhat tentative"[12], are applicable to his own projects. It's an autonomous reading process that is present since his thesis, where he states his analyses are independent of what the authors state. Perspective underlined by Allen, to whom Eisenman's analysis of other architects are "against the predominant interpretations" of their works, as well as the author's "own explanatory framework"[13], or as Zuliani shows, Eisenman objectify the projects he analyzes, separating them from the investment of their producers, even when criticizing his own works[14].

Not being able to fix a single reading is not a problem. This condition of ambiguous readings, these two faces, reflects Eisenman's formal exploration aligned with his discussion of architectural autonomy, indisputably close to his notion of conceptual architecture at the time. His projects have become a material dissolved in the institution, an architecture of architecture. His works are not finished if executed. An edifice, as an object, doesn't coincide with the project. So Eisenman can rework his projects as material in other medias, as we saw the House I became part of his conceptual architecture

when together with House II, even if it has other reading when paired with his thesis. The project as material. He could read the House I afterward as if it were Terragni's, or Aalto's, and by this advance his explorations the same way he would by reading other architect's projects. Not coincidently that Rowe introducing the Five Architects discusses about the non-coincidence of the physique-flesh and the morale-word[15]. In this sense, House I is an important step on Eisenman's abstraction path, which upon its production and reflection Eisenman could go from his thesis, the diagrams of anteriority, to his conceptual architecture, his Transformations, or diagrams of interiority. The characteristics of a project that could lead to another phase are not strange to him. In the book House X, he states the namesake project as an inflection point between the Transformations and the Decompositions[16]. As in his Decompositions, which Eisenman affirms House X as in both periods, he inserts House I in his Transformations after House II. This fits Eisenman's affinity between projects and texts. As the object alone doesn't grasp a single reading, the associated discourses – being them a text, an exposition, etc. – narrows or suggests the interpretation universe. Like Evans points out, it's necessary that we accept Eisenman's formal narrative to understand his projects as he intends.[17]

3. House I as a position in a formal series

Those two faces aren't disconnected, and the continuity between those two Eisenman's moments is imbricated in a larger momentum. Since his thesis, Eisenman discusses Architecture as something that has a date, the sensed as the classical and natural architectural language, the one since the renaissance and continuing to the modern. By his references, we identify two distinct points on this timeline: Palladio and Terragni. Despite him citing both architects as references in the thesis afterword, Palladio is a bashful reference at first. He mentions only the Palazzo Chiericati, but it's important as it came to Eisenman by Rowe, from whom it comes by Wittkower. Both influences Eisenman[18], highlighting the nine-square as used by Wittkower to read Palladio. Rowe's The Mathematics of the Ideal Villa, for example, is important not only for his methods but also because it exposes that Palladio uses the division of three, whereas Le Corbusier uses four[19]. Considering the nine-square, this turns our attention from Le Corbusier to Terragni, who comes to Eisenman from his revelation in Como[20], then adhered to him, and is constantly re-analyzed by the architect.

Eisenman cites Palladio's Palazzo Chiericati, the main project Eisenman reads from Terragni is the Casa del Fascio, and his first project, House I, is a house part of a series of houses. So, even if Casa del Fascio isn't a proper house, and the House I was originally a toy museum, all those names carry terms referring to an architectural type: house. It leads to see Eisenman putting himself in a discussion, a sequence which dates from the start of what he considers the architectural discourse, the renaissance. When he started these houses projects, he had been pursuing to correct, to continue the modern – as it appears in his Thesis and Dall'Ogetto alla Relazionalità -, but by their end he began to advocate overcoming the modern – as he says in the texts Post-Functionalism, 1976, and The End of the Classical, 1984. In this sense, his self-referential houses, the diagrams of interiority, are the swan song of this line, as the series end coincide with him declaring the end of that historical line. This is relatable with Hays, who perceives Eisenman as a late avant-garde, an expression of a line end, with his house series mourning the end of the modern city. In that regard, city is interpreted an organism whose development coincides with the timeline cited by Eisenman: from the renaissance to the modern[21].

However, looking at this sequence by the function type is tangent to the fulcrum of Eisenman's work, the form. His houses series, including House I, his thesis, and the 1970s cited texts are strong formal discourses, formal researches. Returning to his thesis, even his historical discourses are formal ones. As an example, when referring to the ways to treat the volumes - mass, and surfaces - he states that traditionally, architecture operates as mass, whereas the surface is a modern development and the mass-surface dialectics a new ground emerging in some modern architects, like Le Corbusier and Terragni.

Pairing this sequence, since Palladio to Eisenman, passing by Terragni, with George Kubler's concept of formal sequences, we can read this not as a house type swan song, a weak link between those projects, but as a formal sequence new position. Kubler states that an object participates in several formal sequences, being a cluster of them. We are looking here upon a formal sequence of the project composition. We are not looking at column forms, the white of the walls, the glazing panels, or some other element that lead to other formal sequences that also insert Eisenman in relation to Terragni and Le Corbusier. The permanence between the two analyses bases this, as the diagram used in those readings remits to two compositional characteristics Eisenman absorbs and develops: the subdivided square as the nine-square diagram and the frontal articulation plane, the formal resolution from a frontal facade.

Those two House I analysis reflect Eisenman opening a new position on the formal sequence. The reading from Eisenman's thesis reflects the formal sequence current state, while the one after House I, from House II, points to the new dimensions allowed by the new position opened by the project. Recovering the diagrams denomination, anteriority to the phase before the House I is the moment when the architect absorbs through references the current position. Through the anteriority he absorbs the formal sequence enough to leap to a new position. Eisenman says the diagram allows the repetition of the past, but differing[22]. Comprehension very similar to Kubler's, to whom the formal development occurs upon little variations of an antecedent repeated. For Kubler every work is a signal re-transmitted by others repeating that signal, and every repetition is a chance of variation upon the original.

The nine-square tri-partite division aligns Eisenman with Terragni and Palladio. Eisenman develops this composition tool with a contribution that can be simplified as a reduction of the restrictions in this diagram. As identified by Zuliani, he removes the condition of the "lines as walls". As we saw in the analyses, Eisenman turns the diagram divisions into volumes and weakens the grid tautology. The nine-square, as a regulatory grid, is multiplied. Besides the House I plan general division in nine, the two smaller squares of the diagonal displacement can also be divided in nine. In this project, those two smaller squares still refer to a single grid, a sixteen square. Additionally, in House II, he operates the same diagonal displacement but with two independent grids. Superposition evident in the corners where the vertices of the two squares don't coincide (Fig. 4). It's worthy to notice how these divisions present only in House I shows another ambiguity: it can be read both as the tri-part division, the nine-square of Terragni and as the four division of Le Corbusier.

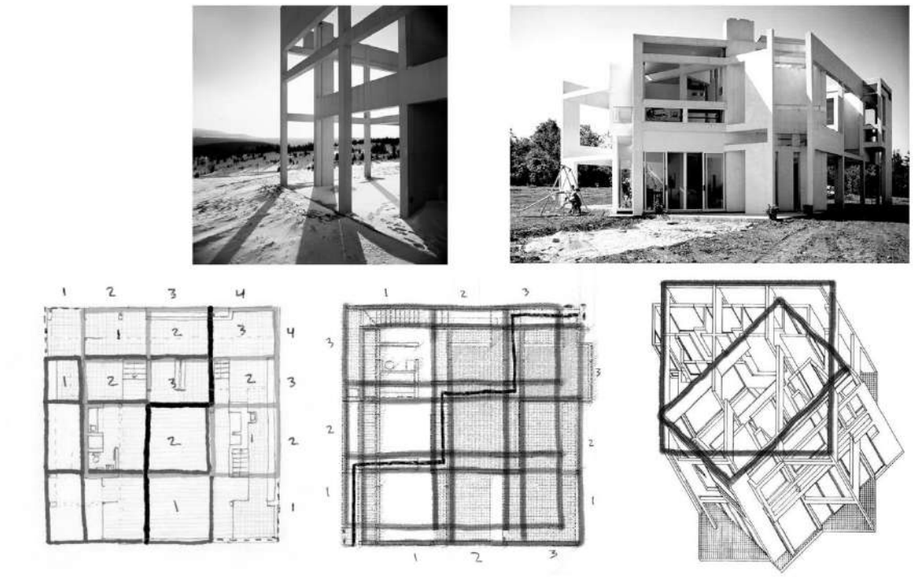


Fig. 4

Like Rowe's studies, which approximate the modern and the classical, Eisenman reads in Terragni's Casa del Fascio the articulation by a frontal facade as in Palladio's Architecture. The front facade, an orthogonal plane, organizes the "pack of cards", and articulates the internal tri-partite divisions. As we have seen above, both analysis of House I are articulated from the frontal plane; either by the reference for the external vector or for the diagonal displacement. Eisenman also reads the frontal plane as a condensation of the planes behind it, a concept that keeps relation with Rowe and Slutzky's phenomenal transparency. Eisenman's contribution in this compositional aspect is subtle in House I. Even though both the diagonal displacement and the spiral tension the form on one side beyond the original square frontal plane, it's especially with the rotation intrinsic to the spiral that he slowly brings an ambiguity opposing the frontal with the oblique. Firstly appearing in his text From Object to Relationship II, 1971, the frontal is paired with the oblique and conjugate as a dialectic as the mass-surface. Condition widely explored in House III, developed at the same time as the text, it features two cubes rotated 45° in relation

to each other. Released from a single grid, he can also refer to grids not aligned in relation to each other. Thus, from every side the project is both frontal and oblique in relation to the observer (Fig. 4).

4. Conclusion

Analysis upon Eisenman's houses series points out important discussions, but lead to a fading of House I. Like Zuliani's discussion, Janus' two faces of House I allowed us to see it beyond portrayals as the first of a series, as not as mature as House X, but as the moment Eisenman puts himself into a formal sequence and expands it. The understanding that House I acquires its canonical reading from House II, points out an important connection of this project with the series of houses, but the reading from the thesis connects those to another series not only forward but also backwards, the formal sequence.

House I connects ahead through its formal explorations to House II and House III. This dialogues with Eisenman stating his first four houses were experiments upon a cube, departing from it on House VI, a project that is supposedly another step forward in the formal sequence. Moneo also saw those four first projects as a group[23]. Exploration of a cube that is a step forward from Casa del Fascio's one. Recovering Rowe, who says "[…] of an idea which is represented by the house as a cube"[24], brings an interesting approach of the formal sequence with the house type. This also reinforce that it's a cube, a form, with roots in Palladio, besides Le Corbusier and Terragni.

Moreover, the notion of the formal sequence allows us to see those projects not as ends, but as mature states of those forms. We can't define an end for a formal sequence, at most that it was halted. In this sense, Kubler states that:

"Early solutions (protomorphic) are technically simple, energetically inexpensive, expressively clear. Late solutions (neomorphic) are costly, difficult, intricate, recondite, and animated. Early solutions are integral in relation to the problem they solve. Late ones are partial in being addressed more to the details of function or expression than to the totality of the same problem."[25]

Therefore, Eisenman's formal complexity with overlays, interpenetrations, and dislodges, and the departure from function reinforce that this formal sequence is in its late exponents. Our reading comes close to ones like Hays', but diverging from them as it's not a closing, but a mature moment of the formal sequence.

Notes

1 Peter Eisenman, *Ten Canonical Buildings* (New York: Rizzoli International, 2008), 18.
2 Stan Allen, "Eiseman's Canon: A Counter-Memory of the Modern." In *Ten Canonical Buildings,* Peter Eisenman (New York: Rizzoli International, 2008), 12.
3 Peter Eisenman, *Diagram Diaries* (New York: Universe Publishing, 1999), 37.
4 Rafael Moneo, *Inquietação Teórica e Estratégia Projetual,* trans. Flávio Coddou (São Paulo: Cosac Naify, 2008), 181-182.
5 Robert Somol, "Dummy Text, or The Diagrammatic Basis of Contemporary Architecture", In Diagram Diaries, Peter Eisenman (New York: Universe Publishing, 1999), 7.
6 Peter Eisenman, *The Formal Basis of Modern Architecture* (Zurich: Lars Müller Publishers, 2006), 381.
7 Peter Eisenman, "Interview with Peter Eisenman: The Last Grand Tourist: Travels with Colin Rowe," *Perspecta*, no. 41 (2008): 130-139. MIT Press, and Eisenman, *Diagram Diaries*, 49.
8 Eisenman, *Diagram Diaries*, 31.
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12 Eisenman, *Diagram Diaries*, 53.
13 Allen, "Eisenman's Canon," 11.
14 Guido Zuliani, "Evidence of Things Unseen." In *Tracing Eisenman,* ed. Cynthia Davidson (New York: Rizolli International, 2006), 335-336,
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19 Colin Rowe, *The Mathematics of Ideal Villa and Other Essays* (Cambridge: MIT Press, 1976), 11.
20 Rowe, "Introduction," 7, and Eisenman, "Interview with Peter Eisenman: The Last Grand Tourist: Travels with Colin Rowe."
21 Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge: MIT Press, 2009), 10-11, 51-52.
22 Eisenman, *Diagram Diaries*, 37.
23 Moneo, *Inquietação Teórica e Estratégia Projetual,* 142-153.
24 Rowe, *The Mathematics of Ideal Villa and Other Essays*, 14.
25 Kubler, George, *The Shape of Time* (London: Yale University Press), 55-56.

Image Captions

Fig. 1. House I isometrics presented by Eisenman on *Five Architects*. Left pair, diagonal dislodge; middle pair, planes sequences; right pair, diagonal expressed on a beam.
Fig. 2. Left above, House I nine-square division. Left below, Eisenman's Thesis nine-square reading of Casa del Fascio. Middle pair, planes sequences and planes compression. Right pair, volumes sliding in relation to each other and dislodged beam.
Fig. 3. Three above, from left to right, spiral development. Down left, site situation sketched upon site plan presented on Izar's Diagramática. Down middle, Eisenman's Thesis partial Aalto's spiral. Down right, spiral over nine-square.
Fig. 4. Left, nine-square on House I smaller squares and overall four division. Middle top, Eisenman's website House II corner photo revealing the two superposed grids. Middle bottom, two nine-square grids superpose on House II. Right top, Eisenman's website House III photo showing the frontal and oblique dialectic. Right bottom, Eisenman's House III isometric with two squares rotated 45º in relation to each other.

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Biography

Bruno Juliani Mentone Graduate in architecture and urbanism in 2013 at the Faculdade de Arquitetura e Urbanismo of the Universidade de São Paulo (FAU-USP), and master in History and Fundamentals of Architecture and Urbanism in 2020 by the same institution. Whose research revolves around the issues of form and the relationship between architecture and other fields of knowledge.

Blurring the map

Depicting the city of Curitiba as both Spectacle and Experience

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Abstract

Maps consist of a medium for transcribing the City. The act of mapping opposes the objectivity of the representation device to the subjective, specific, and divergent interpretations of those who produce it. This article debates mapping the dual character of the City in its superimposed depiction as both a product – *Spectacle-City* – and as human manifestation – *Experienced-City* – in the context of Curitiba, Brazil.

The coexistence of *experienced spaces* and *spectacle* is evident in Curitiba – notorious for its image of a *model-city* – particularly in its central *Rua XV de Novembro*, a site defined by an open potential for appropriation as well as by a broadcasted superficial image of its objects. This dualism relates to two specific mapping strategies: the first one, present in tourist maps, is to promote a positive caricature of the urban realm; the second one, such as the goal of Situationist maps, is to foster human experience as a means of producing space. To avoid pretense objective mapping or choosing one of those strategies over the other, a methodology is outlined to explore new dialectical mappings, through the compositional mechanisms in common in both archetypal and contradictory representations.

The research began with an inventory, through successive cataloging of layers from a delimited field of Curitiba – *Rua XV* –, followed by the development of a notation to represent and manipulate their essential fragments. By plotting two opposing depictions of the same site to a single mapping process, the exploration depicts the potential for human manifestation that arises from the *Spectacle-City* as well as representing potential imagistic narratives based on its human experience. By approaching the graphic space of the map as a dialectical tool for exploration and comparison of conflict, it can be understood not only as a critical transcript of the City but also as a medium for debate.

Keywords: Curitiba, mapping, critical cartography, spectacle, experience.

1. Map as a dialectical tool: the interface between the space and its image

The contradictory character of the map can be illustrated by its dual potential "as both analogue and abstraction"[1]. If, on the one hand, the map's objective character relies upon its analog transcription of reality – a horizontal plane depicting a direct representation of the terrestrial surface, literally projected on a paper – on the other hand, selection, omission, and representation of data by the one producing it fosters the subjective – often abstract – nature of the map as a tool.

Cartographic representations of space and territory are a subject abundant in contemporary practical and theoretical discussions. The historical disruption of the map as a tool for empowering, through participatory methodologies, or the effort to oppose its inherently subjective process, through information systems and data collection, are ongoing discussions. Regardless of the map's degree of subjectivity and relativity, however, it operates at the interface between what is taken as real – space in its essence – and the portions which are represented – its image.

However, while maps are representations of space, we can also argue that space can be apprehended from the map. In *The Agency of Mapping: Speculation, Critique and Invention*[2], James Corner points out that the map also precedes the territory, since certain spaces only become visible once they are mapped. According to Corner, the subjective judgment applied to the map is what reinforces its potential as intent, more than simply the transcription of space.

In this context, the map relates to Jean Baudrillard's concept of "simulacrum"[3], as a model whose origin is not in reality, but rather precedes it. As a model without origin, in reality, the *simulacrum* is a consequence of both the excess of information and the hypervisibility society. Its consequences are a reality that begins to "just coincide, copy or, at most, confirm what it has been emulated before in the form of a simulacrum"[4]. Instead of elucidating, hypervisibility ends up producing a kind of confusion between reality and its referents – imagistic, superficial or driven by the notion of spectacle.

Beyond the notion of subjective judgment as a propositional and inventive act, as pointed by Corner, the map as simulacrum assumes a superficial role: a space conceived from its imagistic features is often limited by them. According to philosopher Byung-Chul Han, this problem is worsened by the idea of imagistic coercion, driving reality to the point that *everything is visible and becomes image*[5]. Approaching the consequences of this discussion to inhabited space, he points to the risk of this coercion – the disappearance of imagination and fantasy in contemporary society, necessary conditions to incite the habitability of space.

According to Guy Debord, dwelling and *image* are opposing forces and tend not to coexist. The more users of space see themselves as spectators of the city instead of actors, the less they experience space.

The alienation of the spectator, which reinforces the contemplated objects that result from his unconscious activity, works like this: the more he contemplates, the less he lives; the more he identifies with the dominant images of need, the less he understands his own life and his desires. The spectacle's estrangement from the acting subject is expressed by the fact that the individual's gestures are no longer his own; they are the gestures of someone else who represents them to him. The spectator does not feel at home anywhere, because the spectacle is everywhere.[6]

If the notion of *Dwelling* is a thesis of spatial essence based on human *experience*, then the concept of *Image* – as a materialization of the *spectacle* – would be its antithesis. However, in a widely connected society, increasingly reliant on a constant flow of information and images, how can we bring back the imaginative potential as a means to claiming the active role of users in space?

Above all, it is essential to put into focus the tools that operate in this interface, mainly as dialectical mechanisms that allow us to understand and question the production of contemporary space.

Roland Barthes[7] points out the importance of a narrative's plurality of meaning, in a way that a reader can extract material from what is presented to him and rearrange it in his particular way. Barthes explains that by transmitting *infra-languages* instead of ideas, the author provides tools for interacting with the reader, who becomes a co-author instead of a pure spectator[8].

The dialectical potential of the map relies upon its use as an *infra-cartographic* tool, enabling the potential for imagination as an alternative to purely imagistic constructions. As a reaction to the spectacular hypervisibility of images, often reflected in portrayals of the territory, this paper narrates a process of *blurring* the map, unfolding into dialectical representation strategies that mediate the conflict between *spectacle* (*Image*) and *experience* (*Dwelling*). To rehearse the *infra-cartographic* method and to demonstrate the arguments through visual products, the process consisted of mapping a Brazilian metropolis subject to a strong *city-image*.

2. Spectacle x Experience

In the city of Curitiba, Brazil, the 1990s were marked by a strong marketing appeal into the idea of a *Model City* – a world-class example in terms of planning, public spaces, transportation –, a notion that remains to be broadcasted. The most obvious example of this *city-image* is materialized on the tourist map of Curitiba – a graphic product that represents what "experiencing the City"[9] is supposed to mean according to those who designed it.

On the assumption that maps both precede and derive from the territory, the collective imagination in Curitiba can be traced back to its imagistic representation. If the tourist map is to present itself as a synthesis of the city as apprehended by the population, its filtered, distorted, scaled and overlapping icons reflect the construction of the ideal of the city.

This condition of image prevalence in contemporary culture is what Guy Debord calls *La Société du Spectacle* (The Spectacle Society)[10]. Once the city is constructed from an image of its reality, its spaces progressively result from the logic of the *spectacle*. According to Debord, the notion of spectacle is the epitome of capitalist society: "The spectacle is capital to such a degree of accumulation that it becomes an image"[11].

As a member of the Situationist movement[12], Debord was one of the most notable counter-cartography artists. In his maps, the French writer rescues the concept of *psychogeography*[13] to bring a cognitive cartographic strategy as opposed to the map's traditional imposing form.

In *Guide psychogeographique de Paris*, Debord cut parts of the *Plan de Paris a vol d'oiseau*, by Georges Peltier and reorganized them into urban archipelagos connected by arrows, towards a cartographic representation that, in opposition to the strategic character of the *Plan de Paris*, would allow the tourist the experience of *getting lost in the city*. Hence, through the experience of discovering the city, the tourist could later redo the map according to its *Dérives* (drifts). Furthermore, in *The Naked City*, Debord portrayed fragments of the central area of Paris, rearranged according to the intensity of attraction or repulsion between the urban fragments. This intensity, represented by arrows of different sizes and directions was to be measured from perceptions derived from the *drifts*. As a result, the fragmented maps sought to represent a mental topographic construction of space by the users of the city, in a reaction to its spectacle-driven and imagistic perceptions.

As graphical products, however, Debord's maps did not fully break with traditional cartography. Otavio Leonidio argues that, as in conventional maps, *The Naked City*, for instance, intended to be a graphic translation, more or less faithful, of a given topography[14]. As a result, the apparent "disorder" in the representation follows conventional compositional rules, generating a balanced and hierarchical image of fragments and arrows. In this sense, the map-making procedure does not correspond to the thesis the map proposes to portray – a space shaped by the Drift[15].

The side-by-side arrangement of Debord's maps – resulting from drifts - with the tourist map – which results from spectacle – can explicit compositional similarities between both representations (Fig. 1). The tourist map of Curitiba, fragments of a caricature distorted in terms of scale and distance, sought to promote an advertising guide on "*Inhabiting the City*". Adversely, Debord's maps, with equally displaced fragments, intended to guide users on *how to get lost in the city* to further inhabit it. In the latter, the arrows representing the "main axes of passage" do not concern geographical locations, but instead portray the connections that arise from "an unconventional experience of the public space"[16]. Equally, the distorted road system in the former does not serve as a geolocation device, but rather as a set of links between tourist attractions.

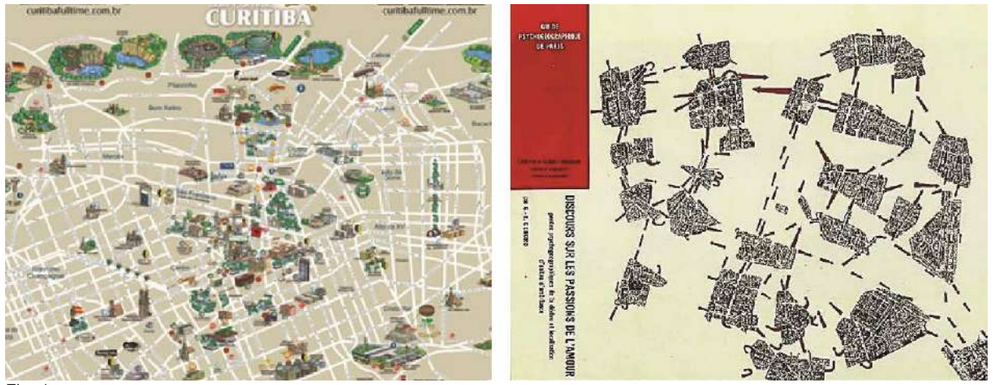


Fig. 1

Thereby, starting from the two map archetypes as graphic representations of each extreme of the duality to be analyzed – *Spectacle* and *Experience* – both compositional processes share some similarities despite their opposing goals. In addition to the fact that both tend to portray a single idea of inhabiting the city – as two opposite *guides* of urban centers – three compositional mechanisms stand out, which can be translated as 1) The Field; 2) The Fragments; 3) The Connections.

– *Field*: (The definition of specific clipping and point of view) James Corner points out the definition of a field as the first operation in the mapping process. By this concept, a field consists of the graphic system chosen to display the information, including the definition of a frame, clipping, graphic projection, and scale[17]. Both maps exposed are depicted in zenithal projections and start by consciously selecting a specific portion of the territory to be mapped. In the case of the tourist map, intentionally only the northern part of the city is portrayed as the field – since it concentrates most tourist attractions. As to Debord's map, the field comprises the center of Paris, as a critical reference to Peltier's Plan and as his territory of drift.

– *Fragments*: (The selection of fragments of the city to represent the guide) While the objects selected for the map of Curitiba as a metropolitan synthesis are tourist attractions – monuments, parks, memorials – on the situationist map, the portrayed fragments are related to the "subjective, street-level desires and perceptions of Debord, rather than a synoptic totality of the city's fabric"[18].

– *Connections*: (The use of connection vectors between the represented fragments) In the first map, the vectors are present through a distorted road system – as white lines without scale – to demonstrate proximity and ease of access to iconic points of the city. In the second map, they act as subjective psychogeographic vectors of approximation or repulsion between the mapped fragments, depicted as arrows of different sizes and width.

The analysis of both separate maps does not constitute a dialectic in itself but mostly reinforces their opposition. The objective of this research was to start from the compositional approaches of the two maps as a graphic strategy, to further develop a subsequent dialectic process – as a graphic synthesis of the coexistence of *Experience* and *Spectacle* in contemporary urban space. In the studied territory, by interpreting the map as the interface between the real and the Imagistic in Curitiba, the following question was raised: what *images* are capable to reflect what it means to inhabit an urban landscape resulting from the spectacle?

3. Blurring the map

In 1974, French writer Georges Perec carried out a textual essay in the city of Paris, entitled *Tentative d'épuisement d'un lieu parisien*[19], in which, for three days, he recorded an urban place and its human appropriation in descriptive terms. Perec produces an exhaustive reading of the *trivial* as a means to counteract our ignorant gaze towards the city, conditioned to spectacular aspects. He narrates objects, people, actions, animals, paths, letters, numbers, and clouds, without hierarchy, under the influence of trivial events and the passage of time. The incessant and inexhaustible inventory reveals the obvious: the potential of the experiencing space towards the transcription and construction of the city.

Behind Perec's thorough narrative, lies the issue of *visual exhaustion*. In face of the city, the objectivity of our mechanical gaze encodes predetermined images, accepting the best caricature of the city presented to us. In an analogy to a long exposure photograph, Perec's description of what is invisible

to the exhausted eye is what allows a closer representation of the spatial essence. Such representation, however, does not provide answers but reveals the unclearness inherent to the experience of urban space. The attempt to exhaust the inexhaustible – reality – is neither clear nor sharp.

3.1 The Field of *Rua XV*

The first part of the research attempted to define a clipping of Curitiba where the contradiction between the *experienced city* and the *spectacle city* could be questioned, using common operating mechanisms from the archetypal maps exposed. Facing the inability of the two contradictory *cities* to coexist, the construction of graphic strategies aimed for dialectic representations.

The surroundings of *Rua XV de Novembro*[20] were chosen as a delimitation of *field*, due to the dense presence of imagistic elements as well as to the urban vitality of the region. As a graphic system, bi-dimensional and zenithal views were used – like the figure-ground from the tourist map or aerial photographs from the psychogeographic guide. However, the challenge posed was to create a dialogue between the two opposing concepts while reducing biases and preconceptions in the formulation of maps.

To break with the system's dichotomy, this graphic essay on *Rua XV de Novembro* started with an extensive spatial inventory, registered in a binary manner. At first, the successive cataloging of layers, images, fragments, objects, events, and appropriations that make up the territory of *Rua XV* resembled Perec's narrative of Paris, while aiming to exhaust it in a reaction to *tired eyes*.

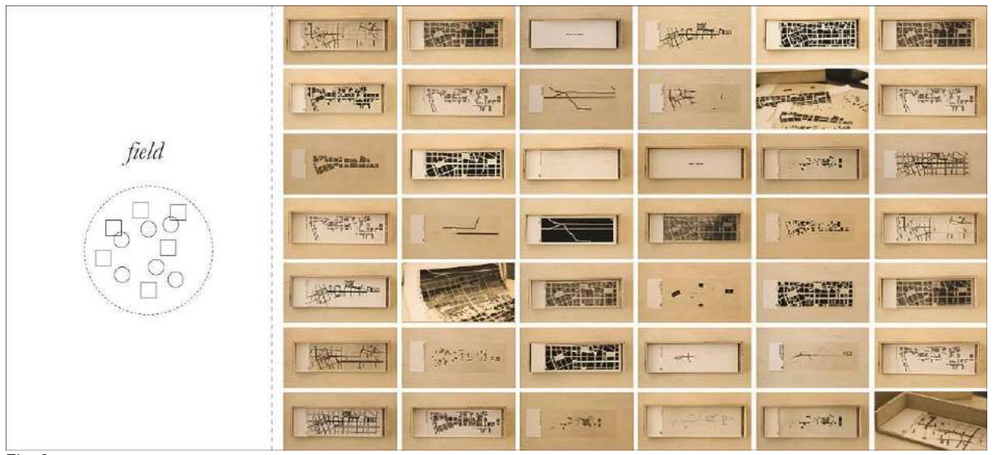


Fig. 2

The figure-ground technique allows only two variables to be used per map, opposing the idea of hypervisibility and excess of information. Plotting the maps in transparent paper results in questioning the superficial and two-dimensional character of maps: as these diverse layers are plotted and printed, the association of several overlapping surfaces adds thickness to the representation. Besides, the layering process corroborates the argument that a greater amount of information does not necessarily incur in sharpness, but in the nebulous character inherent in reality – *blurring*. Using the narrative mechanism of multiple layering possibilities, the stacked maps are an attempt to portray an inexhaustible reality through a graphic narrative of object fragments and time (Fig. 2).

As a process, plotting these early maps does not yet achieve the expected dialectic, but is the first step towards a second procedure: the selection of fragments. How then to select fragments that correspond neither to an imagistic depiction nor to a subjective perception of individual experience?

3.2 The fragments between spectacle and experience

Previously, a conventional mapping technique aimed at adding thickness to the map. Since the layers containing *Experience* and *Spectacle* were not yet interchangeable, there was still no prospect of a synthesis that would take into account a dialogue between them.

The second common characteristic between tourist maps and Debord's maps is the use of fragments of the city to represent space as a whole. Towards the development of a *notation*, a few essential elements, which relate the most to the experience of *Rua XV de Novembro* or its imagery, were

selected. Five elements were chosen as fragments: *galleries*, *historic façades*, *the pedestrian street*, *elevators,* and *commercial façades*.

Facing the difficulty of finding a single representation strategy common to the fragments, they were broken down into three variables to depict them within the *experience-spectacle* conflict. Photographic icons were chosen for the *imagery* variable, as an immediate identification between object and representation. The *flow* variable was included to place abstract notations into a geographic scale, making the tool measurable. At last, the *appropriation* variable was represented as a graphical notation that expresses the degree of drift present in each element.

The maps were plotted considering the elements individually and their unfolding into each variable (Fig. 3). By presenting the map as a matrix of fragments, the process sought to spot an intermediate and dialectical space in the contradiction between representations of *spectacle* and *experience*.

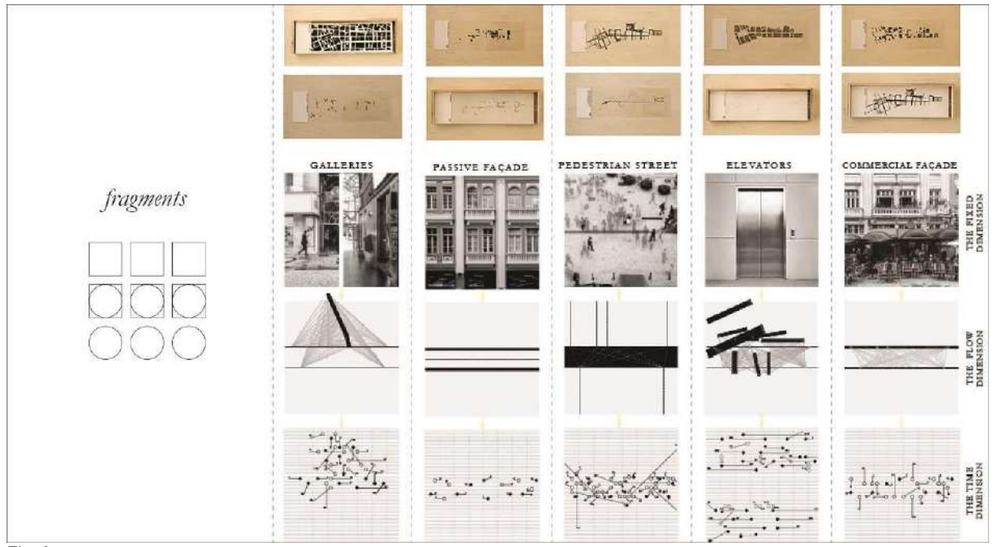


Fig. 3

3.3. Dynamic vectors of connection

The third element common to the two archetypal maps is the presence of connecting axes, expressed by the important streets of the city in the tourist map, and the vectors of approximation and repulsion in Debord's guide.

Unlike tourist and situationist maps – where the problem lies in definitive and static connections – the use of *infra-languages* allows multiple narratives. Taking Bernard Tschumi's *notational process* as a reference, the cartographic tool leads to multiple combinations, exploring the contradictory relationships between imagistic features and the experienced space.

Tschumi finds in Barthes's proposition of infra-languages and narrative multiplicity the basis for building his most notable graphic publication, in which he establishes the act of reading as an act of construction[21]. In *The Manhattan Transcripts*, as a critical alternative to conventional representations of space, the architect investigated *notations* that could express his idea of architecture: the disjunctive relationship between the conception of space and the experience of space[22].

For example, to elucidate the construction present in the reading of his notations, Tschumi offers himself clues about the possibilities contained in the last graphic episode of *The Manhattan Transcripts* (MT4). The architect discusses how a matrix as a graphic system allows different kinds of combinations – from repetitive to disjunctive, from "insertive" to distorted – in addition to the usual horizontal and vertical relations. Thus, the notation allows a relationship between *space, movement, and event* in which these three elements become interchangeable[23].

The architect points out that the combinations resulting from the matrix "are nothing but a form of editing, of montage, where the positions of stage and audience are ultimately reversed, and action becomes its representation"[24]. At this moment, representation "eliminates all that is inessential to the architecture of the city[25]".

Tschumi's process is relevant because it assumes that there is not a single synthesis for the resolution of the conflict, but a plurality of syntheses that arise from the graphic presentation of the problem. In this regard, returning to the context of *Rua XV*, rearranging the fragments can generate narratives that differ from the ones evidenced at an early moment and are capable of redrawing the space (Fig.4).

For instance, what if the galleries allowed the same degree of openness as the pedestrian street, incorporating its intensity of drifts? What if passive facades enabled their interior-exterior dualities in the same way that galleries admit it? What if all appropriation of spatial elements happened regardless of their fixed and flow dimensions? What if the historic facades had no image?

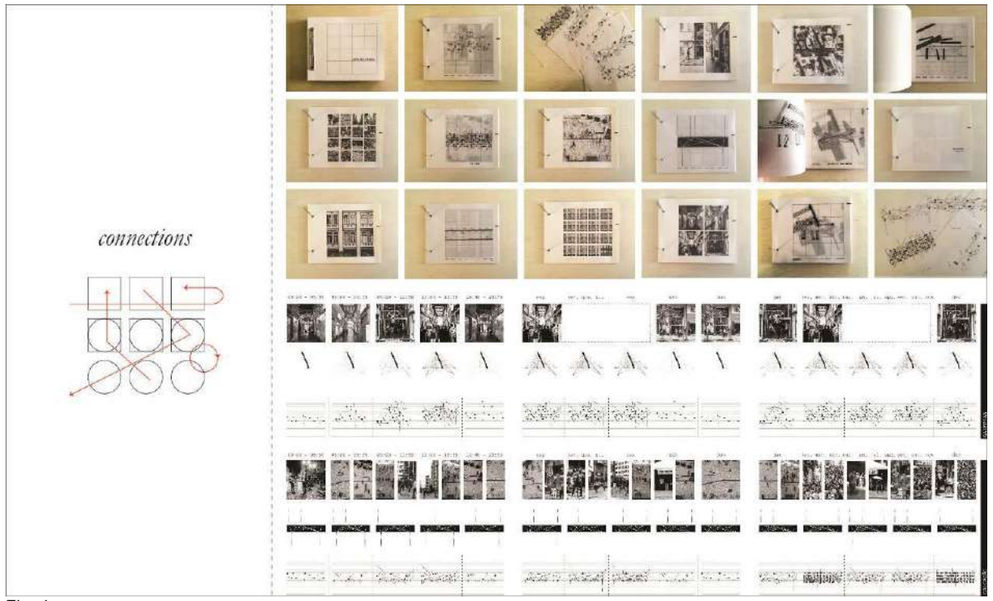


Fig. 4

The potential of dynamic vectors as connection lines evidences the map's potential as a dialectical tool for infra-cartography. To catch a glimpse of the essence of space, the continuous and successive crossing of fragments enables multiple narratives – poetic images of space open to imagination and fantasy – responding to the excess of positivity and information.

3.4. Plotting: The city of Curitiba as both Spectacle and Experience

In his mapping operations, James Corner points out plotting as the last act necessary to the mapping procedure, a synthesis exercise that "entails the *drawing out* of new and latent relationships that can be seen amongst the various extracts within the field"[26]. According to Corner:

There are, of course, an infinite number of relationships that can be drawn depending upon one's criteria or agenda. […] Such techniques may produce insights that have both utility and metaphoricity. In either case, plotting entails an active and creative interpretation of the map to reveal, construct, and engender latent sets of possibility. Plotting is not simply the indiscriminate listing and inventorying of conditions, as in a tracing, a table, or a chart, but rather a strategic and imaginative drawing-out of relational structures. To plot is to track, to trace, to set-in-relation, to find and to found. In this sense, plotting produces a "re-territorialization" of sites[27].

As the last step of the methodology developed, and in face of the infinite number of relationships and approximations between *Experience* and *Spectacle*, the act of plotting is necessary to evidence at least *one* synthesis of the dialectic present in the map. As a proof of argument, the plotting used an example of the most imagistic representation found in the studied space, as a means to extract spatial propositions from depictions of the spectacle itself. Conversely to Debord's theorem that the spectator does not dwell, the objective was to break up an imaginary event using the recombination method to trace a new image of active human experience within the spectacle.

In the context of *Rua XV de Novembro*, *the Christmas spectacles*[28] represent a point in time and space that synthesizes Curitiba's condition as a *spectacle city*. By rearranging variables from the

spectacle itself – which tends to deny the potential for habitability – the process instead announces novel spatial possibilities and composes new buildings amidst the frozen landscape.

Christmas events allow the successive recombination of the proposed frames and variables. Its materialization into a real event reveals a configuration that exists as a latent combination in the matrix of variables, but only emerges occasionally in a particular point in space and in time. The intensity of spatial transformation contained in this event, allows the visualization of a more opening image of the space: a vertical building facade takes on the role of the stage, headquarters of private institutions are converted into a backstage, the heritage façades no longer oppose interventions, monuments are closed off and overshadowed by technical equipment, corporate floors become viewpoints, the snooker bar, side friezes, residential buildings shelter a technical team on its roof, the open space on the pedestrian street solidifies into a *human-wall*. The spatial continuity between sidewalk, facade, urban furniture, corporate floors, converts public space into a single building. A *theater building*, composed of fragments of buildings and urban objects, proves the existence of a different map. Even though only on a few occasions in December during an hour in the evening, *Rua XV* contains spatial glimpses of habitability arising from spectacle (Fig. 5). Were it not for the existence of a real event, this recombination could result from a peculiar rearrangement of the map, which already appears as a plotted spatial configuration.

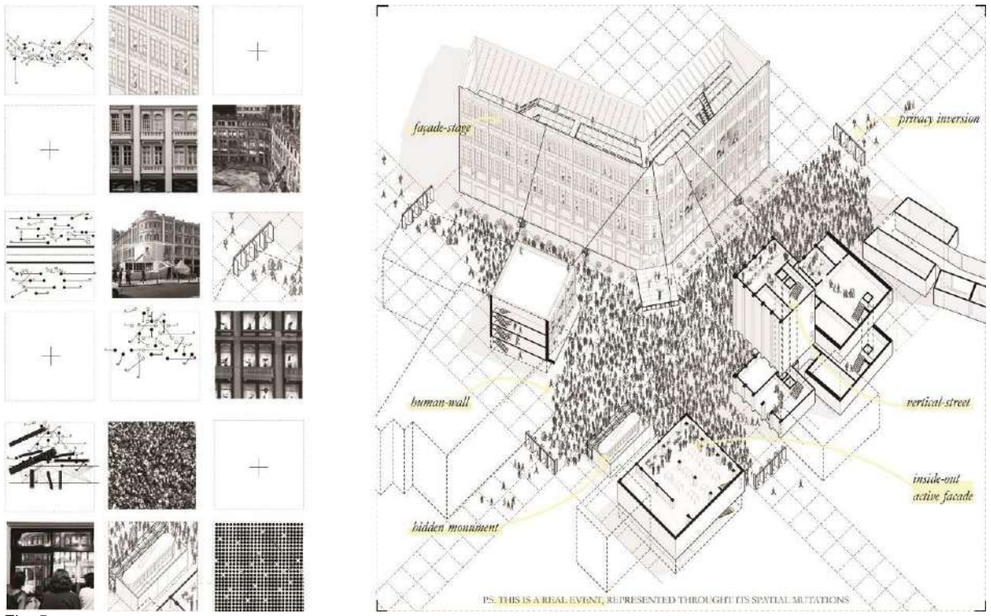


Fig. 5

4. Conclusions: *Infra-cartography* and its dialectical potential

The spatial essence contains an infinite combination of maps, which can only be visualized from a different reading and representation of the objects that compose it. Likewise, there are countless points in space-time where invisible buildings promote the habitability of urban space; however, their maps are still latent. Pursuing the essence of space does not relate to the inexhaustible process of increasing information, but to the potential for rearranging and blurring existing fragments as a mechanism that enables *new images*.

The map, neither fully preceding space nor merely its result, is a fundamentally dialectical tool in the contemporary context, which allows the discussion of habitability without denying its imagistic counterparts, and vice-versa. The dialectic between *experience* and *spectacle* arises from understanding the multiple interfaces between them when possibilities of representation reveal the degree in which they coexist.

As the construction of the map absorbs mechanisms that allow its opening, through the exposure of infra-languages, space does not close itself off but remains open to fantasies of habitability even in a context dominated by the spectacle, inciting the debate about the importance of representational tools in architectural and urban practice.

Notes

1 Corner, James. “The agency of mapping: Speculation, Critique and Invention” en: Cosgrove, Denis. *Mappings.* (London: Reaktion Books, 1999), 215.
2 Corner, James. Ibid., 222
3 Baudrillard, Jean. *Simulacra and Simulation*. (Ann Arbor: The University of Michigan Press, 1995).
4 Wisnik, Guilherme. *Dentro do Nevoeiro.* (São Paulo: Ubu Editora, 2018), 159.
5 Han, Byung-Chul. *A Sociedade da Transparência*. (Rio de Janeiro: Editora Vozes, 2016).
6 Debord, Guy. *A sociedade do espetáculo; Comentários sobre a sociedade do espetáculo.* (Rio de Janeiro: Contraponto, 2017).
7 Roland Barthes. *O Prazer do texto*. Trad. Jacob Guinsburg. (São Paulo: Perspectiva, 2004).
8 Sperling, David. “Manhattan Transcripts desdobrado – A arquitetura parametrizada pelos eventos.” *Cadernos de Pós-graduação em Arquitetura e Urbanismo.* (São Paulo, 2010).
9 The tourist map represents a “risk-free” and homogenous experience of the city, underscoring Curitiba as a product of a complete design, inside the logic of the model-city.
10 Debord, Guy. Op. cit.
11 Debord, Guy. Ibid.
12 The "Situationist International", of 1957, proposed a form of "anti-art", based on the act of "getting lost" in the city as an alternative to live amid capitalist society. With Guy Debord as his most notable precursor, the Situationists proposed the “Drift” (Dérive), which, among their objectives, addressed a new way of mapping and, consequently, inhabiting the city.
13 The concept of psychogeography was defined as “the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals”. Debord, Guy*. Introduction to a critique of urban geography. (*Les Levres Nues. No.6, 1955).
14 Leonidio, Otavio. “Guy Debord e Robert Smithson” en: Leonidio, Otavio. *Espaço de Risco. (*São Paulo: Romano Guerra, 2017), 238
15 Leonidio, Otavio. Ibid., 240
16 Leonidio, Otavio. Op. cit., 237
17 Corner, James. Op. cit., 229
18 Corner, James. Ibid., 231
19 Perec, Georges. *Tentativa de esgotamento de um local parisiense.* Trad. Ivo Barroso. (São Paulo: Editora GG, 2016).
20 Originating in the late 19th century, *Rua XV de Novembro* was considered the main street in the capital until the 1950s. In 1926, its importance to the city due to its commercial vocation had already been converted into a landmark, representing progress as Curitiba's first paved street. In the 70s, a new urban intervention highlighted *Rua XV* again as a symbol of modernity: the transformation of one of the main urban commercial centers into a pedestrian-only street, emphasizing the humanist character of urban planning in Curitiba at the time - a street for people during the rise of the car in Curitiba’s society. In 1974 the street was declared a *State Heritage Site*, consolidating, in addition to its commercial character, its cultural and leisure vocation, which remains until today. Nowadays, *Rua XV* is one of the most iconic *postal-card* o the city of Curitiba.
21 “In this sense, looking at the Transcripts also means constructing them”. Tschumi, Bernard. *The Manhattan Transcripts*. (London: Academy Editions, 1994).
22 Tschumi, Bernard. *Architecture and Disjunction. (*Cambridge: The MIT Press,1998).
23 Tschumi, Bernard. *The Manhattan Transcripts*. (London: Academy Editions, 1994).
24 Tschumi, Bernard. Ibid., 12
25 Tschumi, Bernard. Loc. cit
26 Corner, James. Op. cit., 230
27 Corner, James. Loc. cit
28 Yearly Christmas events, which gather crowds on the street and buildings to watch public presentations that take place on the façades of buildings.

Image Captions

Fig. 1. Left: *Guia Curitiba.* An example of a touristic map of Curitiba, 2016. Right: *Guide psychogeographique de Paris,* Guy Debord, 1957.
Fig. 2. Figure-ground maps of *Rua XV (The Field).* 2018.
Fig. 3. Cartographic Notation: between spectacle and experience (*The Fragments*). 2018.
Fig. 4. Dynamic vectors of connection and new narratives for two elements (galleries and pedestrian street) of *Rua XV*. 2018.
Fig. 5. Plotting experience within an imagistic event – The Christmas Event on *Rua XV*. 2018.

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Biography

Daniela Moro earned her title of Architect and Urbanist from Federal University of Paraná (2018), in Curitiba, Brazil, with her undergraduate thesis *Blurring the Map: a strategy to uncover concealed spatial narratives*. Since then, she develops personal research on visual narratives and graphic notations on Architecture. As a student, she collaborated with Brazilian architecture offices Aleph Zero and Estúdio 41. She is currently pursuing a Master's degree in Architectural Theory, History and Critique, from the Federal University of Rio Grande do Sul (UFRGS-PROPAR).

Decomposition of the hierarchical system
Dualities in SANAA's architecture

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Abstract

This work proposes an analysis of the spatial hierarchy at SANAA's architectural production between 1990-2010. The motivation for this study comes from an interview by Nishizawa, who highlights the interest of the studio "in exploring other possibilities, other ways, other types of relations. In short, inventing new hierarchies" (Sejima and Nishizawa 2004, 25). After such a statement, the hierarchy theme has been pointed out as a particularly important aspect for the understanding of SANAA's architecture by different authors (Hasegawa 2000; Cortés 2007; Blau 2011; Yang 2013). Thus, to further analyze this possible invention of new hierarchies, we selected four buildings most cited by eleven critics between 1996 and 2015. These buildings are: 'De Kunstlinie' Theatre and Cultural Centre, Almere, 2006; 21st Century Museum of Contemporary Art, Kanazawa, 2004; Glass Pavilion Toledo Museum of Art, Toledo, 2006; and Rolex Learning Center EPFL, Lausanne, 2009. As our methodology, we used the "near-decomposability" mechanism from the Hierarchy Theory (Simon 1962). To search the smallest hierarchical system, our investigation starts with binary pairs from the bibliographic review of three authors dedicated to formal analysis (Ching 2016; Clark and Pause 2012; Unwin 2014) and several interviews by architects Sejima and Nishizawa. To analyze such aspects, we used eight binary pairs: parts / whole; figure / ground; transparency / opacity; grid / axis; exterior / interior; grouping / compartmentalization; public / private; served / server. The analysis revealed the importance of binary organization for understanding complex hierarchical systems in the layering process of "near-decomposability". We highlighted the impossibility of constructing a hierarchical description only through binary reading, coinciding with Simon (1962), who observed the need to evaluate the "intensities of interaction" between pairs.

Keywords: Spatial hierarchy, SANAA, Binary system, Sejima and Nishizawa.

1. Introduction.

Spatial hierarchy has been pointed out by many authors as a key point to understand the complexity of SANAA's architecture, by architects Kazuyo Sejima and Ryue Nishizawa. They intend to destabilize the most accepted spatial hierarchies (Hasegawa 2000; Cortés 2007; Blau 2011; Yang 2013). This interest in the spatial hierarchy is motivated by the architect Nishizawa in his own words, who states his office's concern "...in exploring other possibilities, other ways, other types of relations. In short, inventing new hierarchies" (Sejima and Nishizawa 2004, 25). This investigation proposes to approach such spatial hierarchy from binary structures, believing of an existing process that fades the spatial hierarchy on SANAA's work from 1990 to 2010.

To study these binary structures, we supported ourselves on Herbert Simon's "Hierarchy Theory" and his claim that "… a complex system I mean one made up of a large number of parts that interact in a non-simple way" (Simon 1962, 468). According to this theory, a hierarchical structure is composed of interrelated subsystems, or 'sub hierarchical structures', until it is reached the lowest level of the elementary subsystems. Thereby, we took advantage of this fundamental property of complex systems and its characteristic of being structured in layers of levels to introduce a method based on decomposition. We propose to employ the mechanism of "near-decomposability" (Simon, 1962), combined with the order principles of the Formal Analysis in architecture (Ching 2016; Clark and Pause 2012; Unwin 2014), to build up a binary system that is capable of analyzing SANAA's architecture. We investigated the floor plans of four fundamental projects between 1990-2010: 'De Kunstlinie' Theatre and Cultural Centre, 21st Century Museum of Contemporary Art, Glass Pavilion Toledo Museum of Art, and Rolex Learning Center EPFL. The analysis points to something Nakagawa (2008) mentions when speaking of Japanese aesthetics, explaining the pacific coexistence of heterogeneous elements, fading the polarity of the most common spatial hierarchy. Thus, this investigation collaborates on the understanding of which creative mechanisms would be presented in SANAA's architecture, and implicit on Nishizawa's affirmation of "inventing new hierarchies".

2. Complexity of the hierarchical structure in SANAA's architecture.

At the same period of the interview mentioned above, some critics wrote about the hierarchy and the production procedures of Sejima and Nishizawa's architecture. In these texts, it is usually the highlight of terms such as disappearance, dissolution, deconstruction, or even, the liberation of the spatial hierarchy by creating 'non-hierarchical orders' (Hasegawa 2000; Cortés 2007; Blau 2011). The interviewers use the words "hierarchy has disappeared" to emphasize that SANAA's projects "... are free of the usual hierarchies amongst spaces and between the spaces and the programmes" (Moreno and Grinda 2004, 35). The art critic Hasegawa underlines the spirit of architects Sejima and Nishizawa in favor of breaking free from the hierarchy "to treat every element equally" (2000, 23). Cortés, in a similar direction, points to the attempt of architects to remove or at least drastically reduce the traditionally predominant hierarchies, creating repetitive spatial organizations that "...involve the establishment of equivalences between the components of the work" (2007, 35). Professor Blau (2011) defines the spaces designed by SANAA is a non-hierarchical structure, which operates through orders of transparency. Meanwhile, Yang, motivated by Nishizawa's claim to be interested in "... inventing new hierarchies", concludes that the production of SANAA's "...hierarchy is new, then, both as a spatial and as a social system, and it is the activities of the users that are the key to ordering this hierarchy" (2013, 42). Thus, it is possible to call attention to the idea of producing a new spatial hierarchy in the work of SANAA through the 'fade' of a previous hierarchy, through equivalences and equality. In other words, this production transits in the space between poles of a binary system that produces complexity.

This idea of fading the previous prevailing western hierarchy should not neglect the cultural issue and the eastern background of the architects Sejima and Nishizawa. On the contrary, Japanese cultural aesthetics is certainly an important key in the understanding of how SANAA experiments with the hierarchical composition of architectural spaces. Even if at times, these architects deny any historical or cultural references in their projects, as Sejima states: "Generally, we do not refer" (apud Idenburg 2010, 73). In another moment, Sejima (1996, 9) claims not to disregard history and tradition, she just refuses to accept them as fixed assumptions and preconceived responses. However, Sejima and Nishizawa together clarify that many concepts of Japanese architecture are present in their projects. Sejima exemplifies it with the simplicity of the Japanese space, despite all its diversity, there is an intimate relationship between interior and exterior space. This relationship in the traditional space is represented by *engawa*, a type of peripheral porch with the interior spaces that serve as a transitory space, neither fully open nor closed. Nishizawa (Sejima and Nishizawa 2007), on the other hand, mention the light and transparent spatial organization of the traditional Japanese house, where the structure does not hide. The architects say they cannot avoid extracting some influences from Japanese tradition, because this is not an option that they can take. They summarize: "Obviously we are influenced by Japanese culture because we grew up in a Japanese atmosphere" (Sejima and Nishizawa, 2007, 11).

To understand the role of this culture in the production of a new SANAA's hierarchy through fading, we must think about the qualities of Japanese traditional aesthetics: hint, irregularity, simplicity, and perishability (Keene 1969); as well as the concept of spatiality -*MA* (Okano 2012). It is important to call attention to the fact that the Japanese aesthetic sees beauty in complexity, avoiding accuracy and definitions. This kind of aesthetic is interested in the non-static, the transformation through the overlapping of space-time, and even the juxtaposition of concepts. The empty, the unspoken, the simple, and the irregular are powers, possibilities for the action of forces that reconstruct, recode, or just complement them.

This aesthetics based on juxtapositions, or a more complex plurality, manifests themselves in the Japanese artistic environment in general. For example, the Japanese opera *Kabuki* is the greatest manifestation of the cooperative cultivation of the most diverse artistic forms, from music to theater, from dance to recitation. The art of incense (*kodō*), the floral arrangement (*kadō*), the art of calligraphy (*shodō*), and the tea ceremony (*chadō*) are "systems organized in themselves, which can only be expressed in their fullness when in partnership with another artistic practice" (Nakagawa 2008, 109). Nakagawa (2008) also notes that this aesthetic juxtaposition is harmonious, as it emerges from a peaceful coexistence of heterogeneous elements, promoting the enrichment of the whole through mutual collaboration: a union, never a fusion. Thus, the two poles of the binary structure remain present, even if not clearly defined. As we can see, for example, in a painting by Tessai Tomioka (1836-1924), where the landscape composed of peaks, rivers, forests, and buildings, are structured by juxtapositions of several images creating a landscape that does not represent a real perspective (Nakagawa 2008). Japanese aesthetic quality is based on the multiplicity of traits, sometimes on the "quality of indecision", on "intuitive and perceptual understanding rather than rational and logical" (Teiji, apud Richie 2007, 11). We can say that Japanese culture avoids the too logical and rejects what is too symmetrical and structurally linear. According to writer Richie, "…eastern aesthetics suggests that ordered structure contrives, that logical exposition falsifies, and that linear, consecutive argument eventually limits" (2007, 11).

All these points to the importance of hierarchy as a factor to understand the architectural complexity, marked by the difficult reading of its parts and their values, and in the case of SANAA, there is also the ambiguity inherent in Japanese culture. We propose that the fading mechanisms of the spatial hierarchy implicitly brings something of the Japanese cultural formation of architects, working in the interval between pairs in a binary system. The architects themselves express the desire to deconstruct spatial dichotomies, such as the boundaries between the building and the landscape; between the inside and the outside; or still, between the public and the private (Sejima and Nishizawa 2005). One of the strategies most used by them to connect poles would be transparency, which, as Allen emphasizes, has to do with "... a kind of continuous space" (Sejima, Allen, Idenburg and Oki 2010, 110). Sejima claims "...to try to find some kind of transparency without transparent material" (Sejima and Nishizawa 2000, 15). They metaphorically deal with transparency for a contemporary mediatized world because SANAA is an office that is not afraid of facing the contemporary era, instead of fearing it, they intend to confront it.

The complexity of Sejima and Nishizawa architecture is entirely related to the rich idea of ambiguity. To develop this research, it is necessary to think about the hierarchy and its application in architecture, understanding that these binary connections are capable to create the complexity of a structure built by layers of levels. We hope to understand SANAA's process of fading the spatial hierarchy and how it passes through the connection of binary structures, assuming then the peaceful coexistence of heterogeneous elements.

3. Methodology.

3.1. Hierarchy Theory.

To understand the term hierarchy, put by Nishizawa in the plural in "inventing new hierarchies", it will be necessary to approach Hierarchy Theory, an interdisciplinary area that appeared in the 1960s. Hierarchy Theory emerged as an alternative approach to understand complexity, based on the premise that "complexity frequently takes the form of hierarchy" (Simon 1962, 468). As researcher Wu (2013) explains, hierarchy refers to the multiple levels that provide several possibilities for structuring a system. Thus, there are hierarchies, in the plural, because these already manifest themselves in the simplest structures, in the spatial dualities that make up the larger structure of a whole. Wu (2013) describes that Hierarchy Theory is marked by the search for the simplification of complexity, taking advantage of the fundamental property of complex systems, which is the mechanism of "near-decomposability" (Simon 1962, 473). Theoretically, complex systems are hierarchies in a world in which complexity had to evolve from simplicity (Simon 1962). Thus, a large number of components with inequalities of order and magnitude interact in a non-trivial way, generating interactions susceptible to innumerable differences. In Simon's view (1962), hierarchy is not the simple subdivision into parts of the set but deals with the complexity of the relationships that the parts maintain with each other. A hierarchy must be described "...in terms of intensity of interaction" (Simon 1962, 469). Complexity works through "a system that is structured in layers or levels that have asymmetric relations" (Wu 2013, 285), making the structure less balanced. Therefore, we can think of complex systems as composed of subsystems, which in turn are formed by parts, where "the whole is more than the sum of the parts" (Simon 1962, 468). In summary,

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Simon (1962) describes the hierarchy as a complex decomposable system, or nearly decomposable, to its most individual parts.
A second important aspect discussed by Hierarchy Theory is the relationship between complexity and reality. Based on Simon's declaration that the “complexity may lie in the structure of a system, but it may also lie in the eye of a beholder of that system” (Simon 1976, 508), some researchers like Allen and Starr are emphatic in stating that “...hierarchies are observer-imposed constructs which may or may not correspond to reality” (1982, apud Wu 2013, 289). Wu explains that “hierarchies neither are absolutely the reality nor merely the perception of the observer; but rather, they are the products of the interactions between the reality and the observer” (Wu 2013, 290). Hence, the degree of ‘realism’ of the hierarchy depends not only on the nature of the real system, but also on “...the observer’s abilities, including the theoretical framework, methods, and data used to discover the hierarchy” (Wu 2013, 290).
For this research, we adopted the idea of hierarchy as a system composed of interrelated subsystems, therefore, we will adopt the “near-decomposability” mechanism in a binary system as a method for understanding the spatial hierarchy in SANAA’s architecture. On the other hand, we understand the subjective value on the hierarchical comprehension, and for this reason, we present below the methodology used in the construction of the layers of levels of this binary system.

3.2. Construction of spatial and conceptual dualities in SANAA’s architecture.
The binary systems of this search were taken mainly from the literature dedicated to formal analysis in architecture, with Ching (2016), Clark and Pause (2012), and Unwin (2014). Ching chose hierarchy as one of the necessary principles for the production of an ordered architecture, assuming that “...order without diversity can result in monotony or tedium; diversity without order can produce chaos” (2016, 350). For this author, architectural compositions must present differences between forms and spaces, which are singularly visible in a non-regular pattern. Ching (2016) classifies the hierarchy in architecture based on three differences: (a) by size – something exceptional or significantly diverse, greater or lesser; (b) by shape – something unique or different, contrasting with geometry or regularity; and (c) by placement – a strategy to call attention to itself as an important element in the composition.
For Clark & Pause (2012) hierarchy is an order intrinsic to all architecture. They analyze hierarchy as an idea related to (i) patterns, (ii) scale, (iii) configuration, (iv) geometry, and (v) articulation. These authors define a hierarchy in architecture as “... the rank ordering of elements relative to the range of an attribute, such that importance or value is ascribed according to the presence or absence of the attribute” (Clark and Pause, 2012, 312). Therefore, the hierarchy becomes clearer in changing from one condition to another, in which not only physical, formal, and geometric changes would determine a spatial hierarchy, but also other attributes, such as simple-complex; public-private; sacred-profane; served-servant; individual-group.
Unwin (2014) chooses “transition, hierarchy, heart” as one of the seven themes for the analysis of the spatial organization in architecture, bringing to the theme a new focus to say that “...there is a sequence or hierarchy of stages between one static place and another” (2014, 214). In other words, Unwin introduces to the discussion about the hierarchy of the idea that experiencing architecture involves movement. For Unwin, essential elements are: (A) transition-between, (B) public-exterior, (C) private-interior, (D) sequence-hierarchy, (E) event-experience, and (F) heart-core. Thus, thinking about architecture does not only mean understanding its forms or its elements but also considering the spaces and voids that spread rhythmically between them. The author clarifies that hierarchy as “...serial experience of places culminates in a place that is conceptually at the core of the work of architecture – its heart” (Unwin 2014, 214).
For Unwin, architecture sets the tone and atmosphere for the events involved, because “architecture includes the person as an ingredient, not just as a spectator” (2014, 307). This idea reinforces the relationships between the people involved, rescuing Simon's argument that “hierarchy is ubiquitous in both the natural and artificial worlds” (1962, 286). We can see that the hierarchy is present in all the principles of order chosen by Ching, Clark and Pause, and Unwin. However, if the spatial hierarchy for Ching in 1979 was a clear ordering system, over time it has become increasingly complex and ambiguous. Unwin’s analysis in 2010 already pointed to an indefinite hierarchy. Once again, we observe the understanding of a changing hierarchy according to the point of view, depending on the different experiences acquired by each of the users. The question of scale and level where the researcher is positioned within the whole becomes increasingly relevant.
The complexity of Sejima and Nishizawa's architecture can be apprehended, then, by applying the artifice of “near-decomposability” in Hierarchy Theory, from the analysis of its simplest structures - the binary pairs, or spatial and conceptual dualities. To define these binary pairs, we used in addition to the principles of the authors of the 'formal analysis' mentioned above, an analysis of the interviews by Sejima and Nishizawa, and in criticisms of their architecture by 13 authors, between 1996 and 2015[1]. This analysis revealed ten characteristics closely linked to spatial ordering and hierarchy in SANAA’s projects: simplification and abstraction; grid organizations; flexibility; limits; transparency; atmosphere; dissolution of the structure; topological equivalences; clustered organizations, compartmentalization and repetition; and hierarchical relationships.

Thus, from the relationships between the principles of formal analysis and the ten characteristics pointed out by authors and critics, we determined five principles of order that constitute the layers of the hierarchical system: hierarchy by Size; by Shape and Aesthetics; by Placement and Location; by Program and Function; and by Distances and Connections. As the sublevels of the hierarchical structure, the spatial or conceptual dualities proposed for the spatial analysis of SANAA projects were grouped: Parts and Whole; Figure and Ground; Transparency and Opacity; Grid and Axis; Exterior and Interior; Grouping and Compartmentalization; Public and Private; Served and Server.

3.3 Definition of the group of projects for analysis.
The projects analyzed in this research were selected from the assessment of the citation of the theme spatial hierarchy in critic texts and interviews with Sejima and Nishizawa. This assessment realized that four works concentrate the largest number of references, coincidentally four of the largest and important public projects within the set of works of these architects. The projects analyzed are: *‘De Kunstlinie’* Theatre and Cultural Centre, in Almere, 1998-2006; 21st Century Museum of Contemporary Art, in Kanazawa, 1999-2004; Glass Pavilion Toledo Museum of Art, in Toledo, 2001-2006; and Rolex Learning Center EPFL, in Lausanne, 2005-2009. The plans were analyzed pair by pair, seeking to identify the singularities of each of the dualities that present themselves, the overlapping of principles, and their interference.

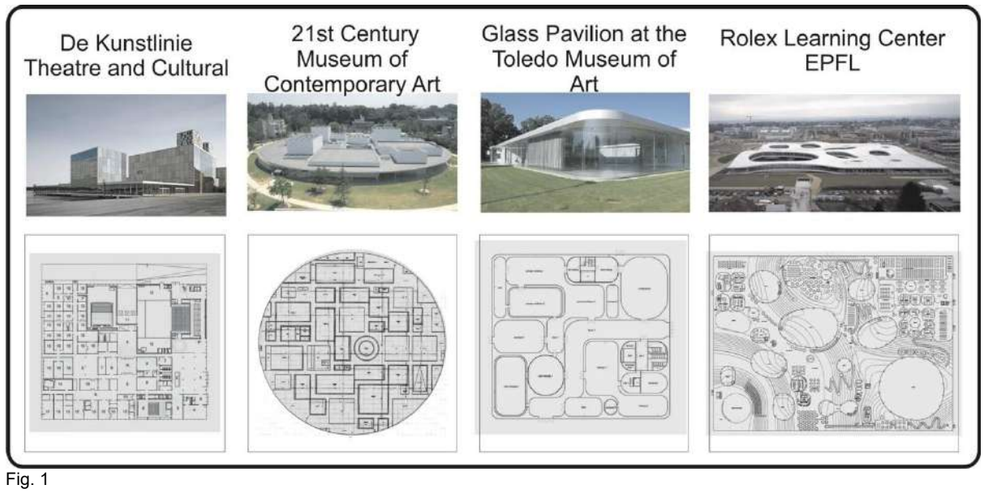
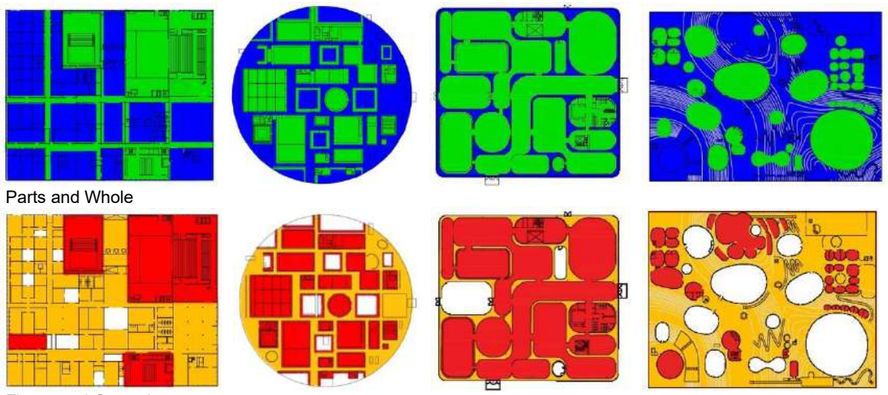


Fig. 1

4. Analysis of the projects based on spatial and conceptual dualities.
Here we present the analysis results of the binary pairs organized in sublevels in the four selected works. In every single analysis, the importance of binary pairs is highlighted, seeking to detect connections with a sort of ambiguous functioning. From the vision of “near-decomposability”, one must think about the production of the spatial hierarchy by overlapping these different sublevels. Explanations, analysis, and illustrative drawings of the sublevels are presented below.

4.1 Parts and Whole.
We can think of a building as a total image captured by the observer, which can be built from the whole to the parts, and from the parts to the whole. The process of capturing objects is done by individualizing them. Depending on the architect's idea and strategy, the parts are identified as a forming element of the whole, and the definition of each part can be identified as a group, detached, or overlapped. We seek to identify the parts with the whole, underlining ambiguity between submission or hierarchical confrontation in the spatial composition of the projects.
It is observed from the analysis the valorization of both, the part and the whole, with the parts being important internally and the whole externally. Variations in the intensity of this analysis are causally related to the program and the context of each project. The duality of the parts and the whole is supported by a strong ambiguity because although the idea of the individualized part is strengthened, the constructive element of the whole is striking and well defined geometrically.

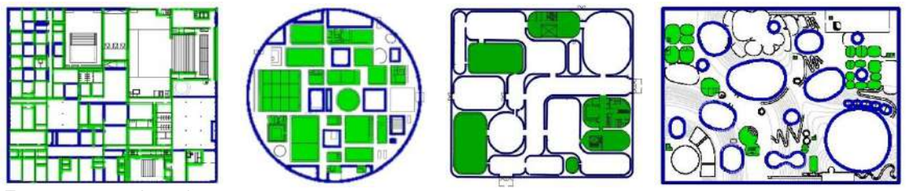


Parts and Whole

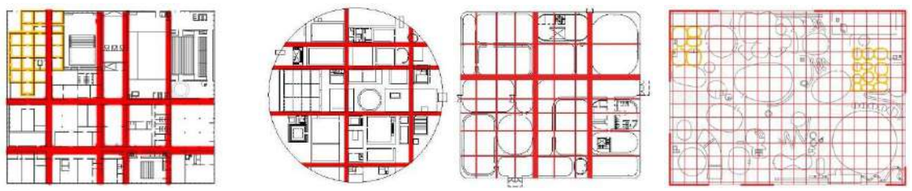
Figure and Ground
Fig. 2

4.2 Figure and Ground.
Regarding Figure and Ground, we call attention to the desire to value one element in correlation to another. In this relationship, there may be a greater valorization of the figure by its formal characteristics, the proportion of the areas, or the distances. On the other hand, the ground can be valued when the figure acquires dimensions that are too small to be perceived or when they do not exist. We intend to identify the casualty or not of the spatial and geometric composition of the plans, looking for possible singular hierarchies.
We again call attention to the role of the individualization of the figures; however, they now fulfil the function of producing relations to improve the value of the ground. The ground deals with space in between; as space - *MA*, it deals with the voids that allow new space-time perceptions. The ground here is valued as an architectural element to be perceived, not as simple residues of the figures. In line with Japanese aesthetics, the void is seen as a possibility for action by forces and ground to complement the figure.

4.3 Transparency and Opacity.
Light is an essential element by which the form is perceived, in the comprehension of its size, volume, colors, materials, location, spatiality, and other perceptions. However, transparency has the power to weaken this perception of form. Thus, the hierarchical valuation of transparency over opacity suggests a kind of shock in the perception of form. It is up to us to discern the role of transparency (literal and phenomenal) in the construction of the atmospheric effect that is characteristic in SANAA's projects.
We observe the constant valorization of transparency in favor of the opacity of the figures, through the individualization or not of the parts. Transparency here seems to function as a mechanism that not only integrates the inside and outside, but also as an element of visual distortions and distance manipulation (often due to the almost opacity emerged from overlaps). Transparency also acts directly in the bounding form of the whole, weakening the accuracy of the envelope geometry because of the user's perception.



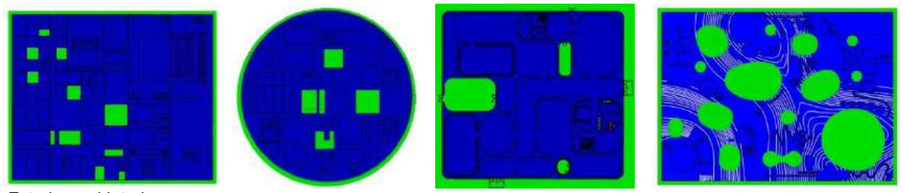
Transparency and opacity



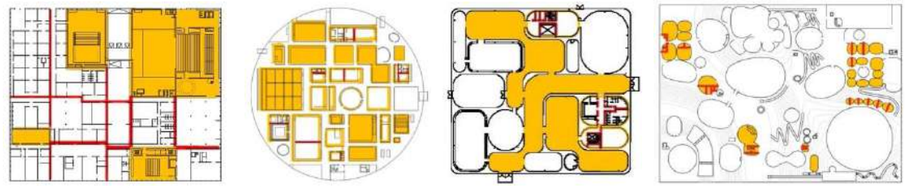
Grid and Axis
Fig. 3

4.4 Grid and Axis.
Asymmetry is pointed out as one of the peculiarities of Japanese aesthetics, and not coincidentally, the plans of Sejima and Nishizawa's projects are almost always asymmetrical. However, the valorization of the grid as a guide for generating elements of the parts produces a hierarchy of ordering in contrast to randomness. The way of operating it, however, does not necessarily produce symmetries and regular organizations. We highlight how the asymmetry and possible fading of the structure act in the spatial construction and, consequently, the recognition of a space where predominates a weak hierarchization of spaces.
We note the valorization of asymmetry supported on a grid that, most of the time, tends to be faded. Some lines of this origin-grid resist the almost random composition of the parts and are maintained as structural or circulation axis. Symmetry thus is practically non-existent.

4.5 Exterior and Interior.
Typically, in architecture, facades play a borderline role between exterior and interior and are manipulated by the architect through the definition of materials, transparency, or even by topological deformation. These limits define the interaction of the building with its surroundings, identifying entrances or views, and can also emphasize the interior elements revealing areas of circulation and activities. In several cases, there may be a hierarchical emphasis on the interior with the exterior, as well as a valorization of the differentiation between interior-exterior regarding its dematerialization. We seek to identify how the limiting elements between exterior and interior, and the relations between inside and outside, interfere in the composition of spaces. These elements reveal relations of equality and difference, homogeneity and hierarchy, levels of density, center, and periphery, closings and openings, and ambiguities.
We observed a clear valorization of the interior space, through the extension of the urban, like a park. The borderline element prioritizes pure transparency, intending to cut out the continuous fabric obtained while connecting the interior and exterior. The facades are not to be appreciated; the idea is to see through them.



Exterior and Interior

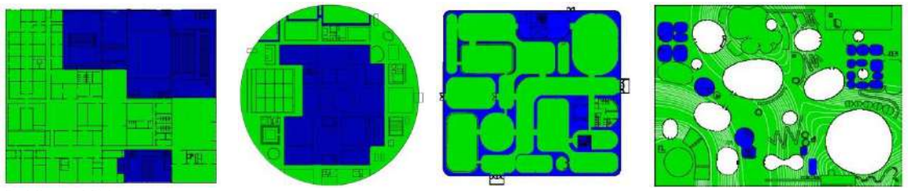


Grouping and Compartmentalization
Fig. 4

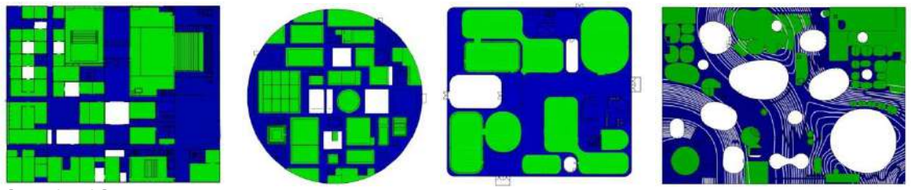
4.6 Grouping and Compartmentalization.
The parts that make up an architecture can be grouped to form a whole, following a composition guideline, such as division by lines (grouping by degrees of juxtaposition), clustering by attraction (by orbital proximity), or grouping by randomness. According to Clark and Pause (2012), the subdivision is linked to the dominance of the whole, where any hierarchization of these guidelines implies a greater or lesser reading of this whole. We sought to verify whether the grouping or compartmentalization duality can reveal the degree of randomness and indeterminacy in the organization of the parts, as well as the evidence for understanding the homogeneity or the little hierarchy of their spaces.
We emphasize the valorization by architects of both grouping and compartmentalization. Different approaches suggest that there is real and constant experimentation. Both binary elements seek to individualize the parts to build a homogeneous fabric, which is ambiguous.

4.7 Public and Private.
Guided by the architectural program, the contrast between public and private is given by the valuation of spaces that require authorization to enter (private) against free spaces (public) or vice versa. This order is essential for the distribution of spaces, and it is up to architects to decide how this will or will not interfere in the spatial and geometric organization of the plan. Organizing public and private spaces is,

among other things, defining routes, restricting access, and visibility. We propose to check if the limiting elements between Public and Private are clear, ambiguous, or even nonexistent. We also try to understand how they hierarchize the space and organize themselves spatially with the program.
We note a clear valorization of the Public space because the SANAA's projects are built to be maximally appropriated by the user, like in a public park. Authorized (public) and unauthorized (private) spaces are directly derived from the program, but it is possible to notice the fading of relations between its parts. However, the architects' idea of a public park keeps within the concept of public the conservation of individual private autonomy, something that appears in the pulverization of this type of space in some situations.



Public and Private



Served and Server
Fig. 5

4.8 Served and Server.
Spaces can be classified into two types: served and server. The first is where events - functions - take place, the fixed spaces where permanence occurs. The second serves the first (for access, to bring infrastructure, to bring light, etc.) and is named server. The hierarchy of these two types of space is fundamental for the elaboration of an architectural plan and is pointed out by Evans (1997) as the "birth of the corridor". This hierarchy transits between the corridors-rooms, public-private, and exterior-interior dualities. Despite these definitions, there is always a user exploring the architecture, with established routes or not. We propose to understand how served and server spaces are organized, through the configuration of the spaces of permanence and flow.
We observe the valorization of the server space because through its manipulation they try to configure new relations to the parts defined by the program - served. In this way, projects eliminate corridors as much as possible; they connect everything exaggeratedly through corridors; they involve everything with server spaces, or they create a large continuous circulation space. In the conventional hierarchical process, the server space is subordinated to the served space, but in these projects, there is a promotion of server space, fading the hierarchies. The interflow throughout the spaces is what makes the conventional hierarchy fade away, in other words, it is the extreme connectivity of its parts that lead to this non-regular conceptualization of the served and server spaces hierarchical structure.

5. Conclusion.
It was presented in this research, using the mechanism of "near-decomposability" (Simon 1962, 473) and the principles of order in the Formal Analysis in architecture (Ching 2016; Clark and Pause 2012; Unwin 2014), a system of binary sublevels composed by -eight pairs. The binary connections aim to create complexity on the structure made by diverse dualities, with many layers within it, and it is inside this complex structure that simplicity is presented. Through this system, we analyzed or related each role within the composition of the architectural plans of four of SANAA's projects between 1990-2010: *'De Kunstlinie'* Theatre and Cultural Centre, 21st Century Museum of Contemporary Art, Glass Pavilion Toledo Museum of Art, and Rolex Learning Center EPFL.
We observed, through the reading of each binary system, a certain tendency to avoid the most polarized hierarchies, where a more precise and static definition prevails. This is clearer in the pairs: parts and whole, figure and ground, grid and axis, grouping and compartmentalization, and finally served and server. It is interesting to perceive that in 'parts and whole' or 'figure and ground', no matter how much the parts or figures gain prominence and autonomy, even so, they need to coexist under the order of the peripheral geometric shapes that build the whole or the ground. Even if the parts or figures and the whole or ground gain prominence, they harmoniously coexist without destroying or merging into each other. This behavior is repeated in several ways and intensities on the other pairs too. This analysis

suggests that the way architects deal with the pairs is close to what Nakagawa (2008) comments on Japanese aesthetics, the peaceful coexistence of heterogeneous elements that promote the enrichment of the whole through mutual collaboration, but never through their fusion. It all seems to reveal a desire to deconstruct dichotomies and barriers through a harmonious overlap. In summary, what we call the 'fading' of the spatial hierarchy in SANAA's architecture is given due to the search for a dialogue between the opposites of the binary pair without dissolving them; instead, they search to value their relationship. The fading is not the erasure of hierarchy, but the production of a more complex one; this blurs an easy reading of the prevalence of one over another, causing them to create "new hierarchies".

Notes

1 The 13 authors are (1) Toyo Ito. Arquitectura Diagrama.1996. (2) Alejandro Zaera. Una Conversación con Kazuyo Sejima y Ryue Nishizawa. 2000. (3) Yuko Hasegawa. Un Espacio que Desdibuja y Borra los Programas. 2000. (4) Cristina Díaz Moreno and Efrén García Grinda. Océano de Aire. 2004. (5) Juan Antonio Cortés. Topología Arquitectónica: Una Indagación sobre la Naturaleza del Espacio Contemporáneo. 2007. (6) Mohsen Mostafavi. Arquitectura Inorgánica. 2010. (7) Stan Allen. Dirty Realism. 2010. (8) Florian Idenburg. Learning from Japan: Single Story Urbanism. 2010. (9) Eve Blau. Inventing New Hierarchies. 2011. (10) José Jaraíz. SANAA: Espacios, límites y jerarquías. 2013. (11) Mark Wigley. Delgada Delgadez. 2015. (12) Federico Soriano. Refinacionismos y Eclectitudes sobre Métodos de Trabajo que Sustituyen a los Estilos. 2015. (13) Beatriz Colomina. Visiones Turbias. 2015.

Image Captions

Fig. 1. The four works analyzed are: *'De Kunstilinie'* Theatre and Cultural Centre, in Almere, 1998-2006; 21st Century Museum of Contemporary Art, in Kanazawa, 1999-2004; Glass Pavilion Toledo Museum of Art, in Toledo, 2001-2006; and Rolex Learning Center EPFL, in Lausanne, 2005-2009. Source: Author's figure.
Fig. 2. Parts and Whole; Figure and Ground in Almere, Kanazawa, Toledo, and Lausanne. Source: Author's figure.
Fig. 3. Transparency and Opacity; Grid and Axis in Almere, Kanazawa, Toledo, and Lausanne. Source: Author's figure.
Fig. 4. Exterior and Interior; Grouping and Compartmentalization in Almere, Kanazawa, Toledo, and Lausanne. Source: Author's figure.
Fig. 5. Public and Private; Served and Server in Almere; Kanazawa; Toledo; and Lausanne. Source: Author's figure.

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Biography

Sérgio Motomura is architect graduated from the State University of Londrina (UEL), in 1988. He was an intern in the International Overseas Technical Trainees Program of Gunma Prefecture, Japan - 1990, developing a study on the use of CAD in architecture. He has work experience as a construction engineer for a great Japanese company and as an architect in Japanese offices for over twenty years. He is interested in themes that investigate the creative process in architectural projects, as well as the influence of multicultural concepts in the possibility of creating new spaces. He is currently a student in the Associate Post-Graduation Master Program (PPU UEL-UEM), in Design methodology, where he developed the dissertation: The Experimentation in Spatial Hierarchy in Architecture by SANAA - between 1990 and 2010.
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Corset and Domestic Space:
Ortho-architectural Exoskeletons in the Disciplinary Era.

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Abstract

Published within half a century from each other, French manual *The Corset Through the Ages* (1893) written by Ernest Léoty and the Swedish housing investigation *The Family that Outgrows its Home* (1941) led by social researcher Brita Åkerman constituted two landmarks of the sexo-political discourses for the construction of the sexualized body and the regulation of gender and family politics. While the French corsetier presented the stay as a technological and social mold of the feminine body that had its routes in antiquity, Åkerman was amassing one of the most thorough collections of knowledge on residential spaces in order to penetrate and modify daily life and social relations within the Swedish domestic realm.

This article juxtaposes two apparatuses external to the body —the corset of the Victorian period and the Swedish research-based domestic space of the postwar years— that were aimed at regulating the feminine and masculine anatomy and its movements, imposed physical and sexual literacy and instigated procreative conducts. By looking into the scientific discourses governing each mechanism, their specific technologies and the instructional knowledge designed to deploy them, this study seeks to chart how orthopedic politics developed during the 19th and 20th century through disciplinary exoskeletons have helped to invent, map out and fix the somatic fictions of sexual epistemology that constituted the basis of the biopolitical modern regime.

Through a close reading of garment patterns, housing plans, scientific texts, how-to manuals and usage guidelines, the article discusses Foucauldian models of biopolitical power and the administering of life as a tool for architectural analyses. Based on this proposition, it reflects on the centrality of sex and sexuality in modern ortho-architectural apparatuses and rises critical questions about their intervention into the biological and social structure of our contemporary society.

Key words: corset, domestic space, biopolitics, Sweden, administering of life.

> The corset today is no longer a prison, as we used to say, but a pleasant retirement home that we know how to singularly embellish and adorn" (Léoty 1893, 105-106).

The sexual empire

In the first volume of *The History of Sexuality: The Will to Knowledge*, Michel Foucault (1981) describes the transformation of European society at the end of the eighteenth century as a paradigm shift in the power dynamic between the state and its citizens. If the previous power regime, defined as a *sovereign society*, was characterized by the ritualization and planning of death by the state, the subsequent regime associated with Modernity, defined as *disciplinary society*, administered the lives of citizens to facilitate health, production, reproduction and to further national interests. Foucault used the term *biopower* (*biopouvoir*) to refer to the force the disciplinary society exerts on the physical bodies of modern individuals to shape their lived experience. If power in the sovereign system was imposed through oppressive rules that demanded total obedience, this modern regime administered power in physically enveloping ways. In other words, molding subjectivity from the outside.

This lends itself to a biological conception of a modern politic that perceived and operated on *the body —the individual, the family* and *the population*— in unimpeachable ways: inscrutable surveillance, scientific enquiry, statistical and demographic data, empirically compiled manuals, optimized spatial and material configurations of the physical realm and public political programmes —what the specialist in modern European philosophy Sven-Olov Wallenstein calls the "biopolitical machine" (Wallenstein 2013, 29).

Foucault underlined the centrality of sexual modernization for the regime as it sought to govern and administer life through discipline. Defining a taxonomy of distinct sexual characters occupying defined roles played in an immutable performance in the plot of society gave rise to a conventional definition of *the family*. This became one of the primary axes of the biopolitical project.

Throughout the nineteenth century, the conventional family unit took firm root at all levels of society as unacceptable anomalies were curbed through juridical and medical control and uniform standards of gender were widely adopted (Foucault 1981, 122). Indeed, *the family* came to be regarded as an essential instrument for the regularization of day-to-day life toward the construction of what philosopher and social critic Paul B. Preciado calls the *sexual empire*: a biopolitical system that uses sex as a somato-political basis for producing and regimenting subjectivity (Preciado 2013, 70). At the macro-scale, that of *the population*, the production of sex and sexuality serves to regulate processes related to reproduction and life for individuals who are treated as statistical phenomena. At the micro-level, that of *the individual,* gender and the expression of the gendered self is used to produce the heterosexual mind and body, artifacts considered to most efficiently benefit government. It is little wonder, then, that *the heterosexual family*, which operated between the two, became a vital mechanism of social control.

As the gateway between the individual and the population, the family is tasked with controlling the body of each family member. Because the body is an implement for reproduction, it must not only be safeguarded against abnormalities but also trained to comply with accepted moral, scientific and technical discourses. In the disciplinary society, the family functions through a system of privileges and alliances that ultimately serve to normalize control of the body and with it, sex and sexuality.

Discipline through exoskeletons

For historian Thomas Laqueur, the sexual epistemology of the sovereign regime could be characterized as a system of similarities (Laqueur 1992, 63-108). Until the seventeenth century, human sexual anatomy was only understood relative to what was classified as the perfect physical specimen of *man*, or, the male body. This meant that *woman* was understood to hold the male sex organs —testicles and penis— within the body, which constituted her body as a reproductive receptacle. As Preciado puts it, "masculinity was the only somatic fiction with political power" (Preciado 2013, 73). Femininity was recognized by its reproductive capacity and the social role associated with it.

In line with Foucault and Laqueur, Preciado identifies a turning point in the early eighteenth century where the pervading system of classification through similarity is replaced by a system of opposition. This led to a new sexopolitical system that recognized the distinct forms and functions of male and female anatomy. This evolution legitimized *woman* as an independent political subject, altering the dynamics of sexual identity pervasive at the time. Naturally, this had implications for the bourgeois heterosexual family who were tasked with normalizing the body. Divergence from the norm, whether sexual, anatomic or behavioral, were pathologized and morally condemned. This gave rise to new pathologic and immoral personages, or, as Foucault describes them, the *sexually abnormal*: "the nervous woman, the frigid wife, the indifferent mother —or worse, the mother beset by murderous obsessions—, the impotent, sadistic, perverse husband, the hysterical or neurasthenic girl, the precocious and already exhausted child, and the young homosexual who rejects marriage or neglects his wife" (Foucault 1981, 110). As ever, human beings were reduced to bodies subject to scientific scrutiny, medical diagnoses, social manipulation, punishment and correction.

Techniques for building sexual subjectivity within this new epistemological framework were —and still are— semiotic, mechanical and architectonic: sexual anatomy guides, birth-rate control policies, restraining garments dictating movement, domestic furnishings, spaces for education, etc. In the disciplinary society, technologies for the subjectivization of human life, and sexual identity, in particular, are external to the body. They regulate the feminine and masculine anatomy and its movement to impose physical and sexual literacy and instigate procreative conduct. For Foucault, these myriad devices and mechanisms operate as exoskeletons, an external force capable of forcing the body to adopt somatic fictions.

Architectural structures can be included in this list of techniques for generating subjectivities. Places like prisons, schools, housing, asylums, military barracks and public space have a mandate to shape and manipulate the sexual body. The individual, which inhabits a space, is disciplined through spatial constructions that constrain, manipulate and mold their body's movement, aesthetics and immaterial psychological convictions in adherence with the biopolitical ideals of masculinity, femininity and heterosexual reproduction. In this way, architecture forms a kind of exoskeleton or a physical force by which somato-political fictions become lived experience.

The masculine body and the feminine body are thus normalized through architectural mechanisms that impose discipline. There are, of course, examples of subjectivization of this kind throughout history.

Sample 1: Corset

During the sovereign regime, the feminine stay was mainly utilitarian or representative of class distinction. The increased popularity of corsets during the Victorian period coincided with the introduction of birth-rate control practices, indicating the calculated implication of corsets in the biopolitical project. The middle-class feminine body had a duty to reproduce, which, in turn, implied a duty to be beautiful. This required constant discipline. The corset provided it, increasing the sexual attractiveness of women by displaying the shape of the female torso, exaggerating the sexually dimorphic curves of the feminine body and focusing the male interest towards the body. This specific garment, the part of the body it modulates and the interest it held for men were interconnected (Willett and Cunnington 2017, 70-71). Corsets worked also as a status symbol, as they were associated with aristocracy and the assistance they provided for elaborating external costumes that expressed class distinction. As corsets exploited the grandeur of the costumes as evidence of rank, it indirectly added an erotic purpose by increasing female sex attractiveness (Steele 2011, 28).

The Industrial Revolution and the growth of consumer societies gave more women access to corsets. Fashion became a mass phenomenon where the feminine ideal of beauty expanded to women of all classes. And so would do corsetry, which had, until that time, played an ambivalent role with regard to both feminine decency and feminine sexual beauty for the bourgeoisie. The democratization of the corset was not, however, limited to a mere reproduction of patterns from the aristocracy to the bourgeoise, and, later, to the working and servant classes. The adoption of the corset should be read as an appropriation of the object in the construction of their identities and characters. For example, after the French Revolution, many women in England continued wearing heavily boned stays which were culturally representative of respectable sexual morality. It didn't work in that way with men, as male wearers of corsets were seen as effeminate, which was viewed as a danger to national strength (Steele 2011, 30, 36, 39).

In 1893, French corsetier Ernest Léoty published *The Corset Through the Ages* (Léoty 1893), an illustrated manual that presented the corset as an indispensable garment necessary to improve the feminine form. Léoty's modern designs were amongst the most fashionable and popular in the city during the late nineteenth century. While most corsets at the time served to constrain the body, Maison Léoty proudly manufactured stays that served both aesthetics and comfort.

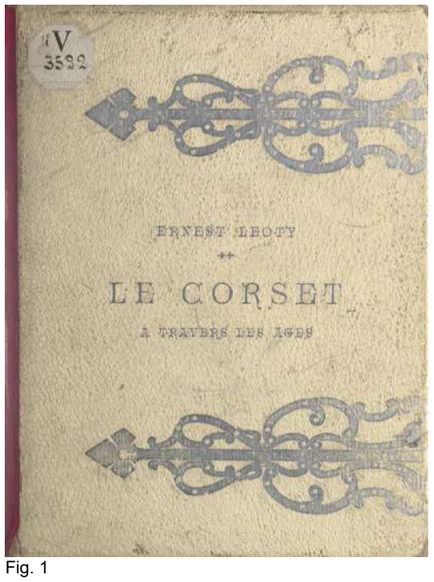


Fig. 1

Léoty conceived the text as a historical and technical study supported by a body of literary research. He supported the treatise with key dates, extracts from classical and modern authors, medical prescriptions and detailed illustrations. A positivistic reading of the garment's history, Léoty's research led him to conceive of a new kind of corset that reached the height of perfection by accommodating all accepted principles of hygiene and feminine aesthetics.
Considering the Foucauldian *rule of immanence*, the form of knowledge that the manual constructed was strategic in the way it implied power relations —and vice-versa (Foucault 1981, 98). Léoty produced claims that were *true* with a supposedly *impartial* historical and scientific narrative (Léoty 1893, X), but this knowledge was embedded in the power dynamics that sought control of human bodies.
In the first section, Léoty roots in antiquity two characteristics of feminine physical beauty achieved through the corseting of the female body: the slender waist and the elevated breast. He highlights a taxonomy of garments —belts and bands— used in classical Greece and Rome to draw a parallel to the modern corset. He concludes that the corset is a practical and reasoned combination of the two main types of Greek and Roman bands: the slender waist of the Greek *zona,* a belt below the chest or around the hip to shape the dress, and the elevated breast of the Roman *fascia*, a sort of belt under the breast to support it (Léoty 1893, 20-21).
In the next chapter, Léoty maps French history against changes in fashion tastes and the corset in particular. Until the end of the sixteenth century, Léoty writes, the corset was used by aristocratic classes to correct the deformed feminine body. It corrected aquiline body posture in favor of a straight and upright position that served to make the body more slender by tightening the chest and stretching the belly. Léoty presented the feminine aristocrat body during this period as long-suffering, with flesh imprisoned by corsets adorned with ivory, silver or with arabesques of gold cloth. The aristocrat body was punished to achieve class distinction.
At the beginning of the seventeenth century, fashions followed by the aristocracy became popular with the bourgeoisie. This body, as with the aristocratic, endeavored to appear clean, honest, well-dressed and pleasant. The imperfections imposed by nature were to be concealed or remedied by clothes and other garments. The corset shed luxurious components as it increasingly became a corrective measure, used to mitigate or avoid skeletal disturbances, provide back support, and, when used in moderation by conscientious women, provide a body of pleasant size and finesse with a well-placed breast (Léoty 1893, 55). The bourgeois body is corrected to achieve feminine elegance.
The third chapter is instructional. Here, Léoty focuses on women's hygiene and ways the modern corset helps women meet acceptable standards of cleanliness and wellbeing. Transcribing the opinion of orthopedists, doctors and other trusted authorities, Léoty advocates the use of corsets from a medical point of view. He then supplements these clinical recommendations with considerations proposed as an experienced corset maker. According to Léoty, corsets can be prescribed to counteract of the spreading of the body's physical frame, to control the size of women's breasts, to relax or distend the muscular wall of the abdomen, to arch the trunk, avoid the lateral deviation of the spine and heal certain lesions (Léoty 1893, 98).

Léoty expands on this capacity to regulate femininity, highlighting ways it that it contributes to sexual subjectivity. Quoting the *Grande Enclyclopédie*, Léoty asserts that the corset regulates the psychological movements women experience at different ages. For young girls, for example, corsets correct defective attitudes, while it works as a "precious agent of restraint" for young women (Léoty 1893, 94). At the turn of the nineteenth century, Léoty states, the corset carries out two functions: to hide and to show to the eye (Léoty 1893, 99). The Victorian feminine body is shaped into refined lines, its movements are curated and the aim is for the body to attract and seduce.
In this way, Léoty's ideal modern corset is an exoskeleton. It serves to regulate the female anatomy, govern its movements, impose physical and sexual literacy and instigate procreative conduct. It is a mechanism by which women can articulate sexual subjectivity in a socially acceptable way and be sexualized in a socially acceptable way.
Léoty supported his study with a rich collection of drawings by French illustrator Saint-Elme Gautier. 33 figures and 17 planches accompany the text, illustrating the bodies of white bourgeoise women in canonical proportions wearing corsets, various highly technological and ornamented corsets and the social etiquette of tightening a corset. Far from illustrating the orthopedic benefits of the garment, the corset is presented as an object of worship, one that is light and comfortable with a beauty all of its own. It shows how the process of lacing the corset with assistance in the women's toilet triggers an elegant and delicate choreography of bodies in space. The subject being laced into a tightening corset is clearly happy to enhance its feminine beauty. The tightener subject is happy to create that feminine beauty. A third observing subject is happily contemplating that beauty as it emerges in front of its eyes. While lacing the modern corset, those that could be put on without assistance, the subject experiences this threefold happiness all at once.


Fig. 2

The absence of the orthopedic element of Léoty's research in the illustrations is not by chance. Léoty was asserting that the task of a skilled corsetier was to make the disciplining of the body invisible: "Having thoroughly studied, as this book proves, all the changes that the corset has undergone since the beginning of the centuries, it does not matter to us whether the waist is short, low or long, we will always put ourselves in tune with fashion and we will try to guide it in order to avoid any ridiculous exaggeration or fatal to health" (Léoty 1893, 87-88). This *ridiculous exaggeration* is earlier presented by Léoty as an "orthopedic look that takes away any feminine elegance" (Léoty 1893, 86-87). If we interpret *orthopedic* as *somatic discipline*, *femininity* as *sexual desire*, and *elegance* as *aristocratic*, we can read Léoty's assertion to mean that the corsetier's main task is to avoid the visibility of the disciplined body where it takes away the aristocratic-like sexual desire that the corset creates.

Sample 2: Domestic space
During the 1930s, Sweden's biggest cities had a significant stock of old and poorly equipped housing. New apartments failed to provide efficiently designed working and living environments, leaving residents in overcrowded, substandard conditions. To improve domestic material conditions and raise living standards, social researcher Brita Åkerman carefully studied how families with children lived in Stockholm, as well as their wishes and desires for the place they called home. Åkerman would go on to play a pioneering role in the modernization of the Swedish home. After the second world war,

Åkerman's commissions, investigations and proposals attracted attention from the national press and the Swedish weeklies. She soon became a public figure, sharing her findings, expertise and opinions with a wider audience. This included the way she lived in her home, which she shared with husband Alf and their five children.
In 1937, Åkerman undertook the first sociological survey on domestic habits in Sweden. Completed over the course of the following three years, Åkerman's manuscript was finalized in December 1940 and published in 1941 under the title *The Family that outgrows its home* (Åkerman 1941). The research was undertaken with the support of *the Home Committee* (*Hemkommittén*), which was formed by members of the various women's associations in Stockholm. It was the Home Committee that sought funding for the survey from the Tenants' Savings and Construction Association (*Hyresgästernas Sparkasse- och Byggnadsföreningen* or HSB), a national housing cooperative under the leadership of architect Sven Wallander.

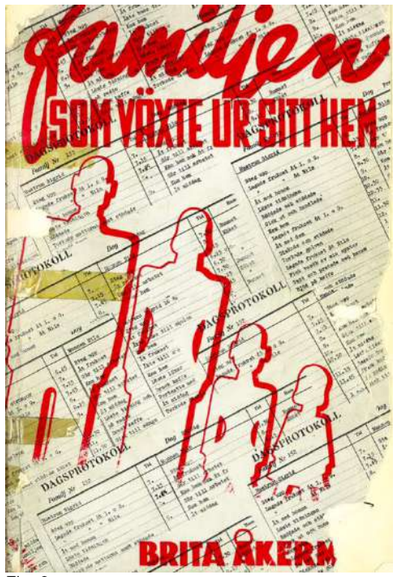


Fig. 3

Participants were selected from a database held by the City of Stockholm of families with children living in a rental with one to three rooms and a kitchen. Around 300 families were invited to participate in the survey, with each family earning 5 SEK in compensation and the guarantee of anonymity. If they accepted the offer, all knowledge would be extracted through observation, personal confession and analysis. Wallander explains that ultimately 214 Stockholm families took this opportunity to "speak freely from the heart about how they live and wish to live. The compilation of what they have said should give the professionals - not least us at HSB - a reason for useful self-examination" (Åkerman 1941, 1).
The premise of the project was that research of such depth and breadth would produce strategies to influence life in the Swedish home, particularly as the study took unprecedented measures to account for the wishes and needs of the city's residents. Observing the families over the course of a week, Åkerman and the research team examined the time people devoted to specific domestic activities and interviewed them about these tasks. An observer was assigned to record the actions of each member of the family, recording what they did, at what time and in which room. Housewives were interviewed according to a set questionnaire, as they were expected to have the operational knowledge for administering or overseeing the administration of daily life, including cooking, cleaning, washing and childcare. Finally, a sketch was made to record the layout of the apartment and its furnishings.
This peculiar combination of confession-based and scientific discourse resembles Foucault's reflection on *scientia sexualis*; that is, the discourse around sexuality generated from the nineteenth century onwards concerned with the systematic extraction of intimate information (Foucault 1981, 51-73). The gathering of objective data and facts was understood by Foucault as a means to transform sex into an object of knowledge, a thing to be understood, controlled and utilized. It is possible to recognize this view in Åkerman's study, where homes and the individuals dwelling in them were studied in isolation and collectively to produce new architectural knowledge. Further, the construction of enhanced domestic practices built by Åkerman on the private confessions of real people, demonstrates how the hidden self, the private self and even the shameful self can be extracted, codified into knowledge and, where there is the will to do so, corrected.

In this example, the spatial dynamic between knowledge and power is crystallized in a comprehensive survey of the domestic dwelling. The house is an essential component of the biopolitical machine. It is the site where the cognitive framework that constructs *the family* is acted out. Awaiting the technical, scientific and moral inventions that increase economic prosperity, the home is the strategic artifact that brings engineered social order —individual, society and family— together.
Knowledge extracted from the home through techniques like direct observation, formal data gathering and personal confession help to effectively administer discipline both in terms of programmatic organization and physical layout. Revisions to its operational and physical design must accommodate whatever new rules of economic growth exist in ways that maintain the affective ties holding family members together. That is the only way for the home to maintain its strategic role. In other words, it must retain emotional connections that grant the continuous operation of the family unit with *man*[1] as the main force for production and insemination, *woman*[2] as the uterus and secondary force of production who guarantees a system of alliances, and *child*[3] as an investment in the ever-increasing value of the family.


NÄR FAMILJEMEDLEMMARNA
BLIR FAMILJ

I många sammanhang har i det föregående framgått hur starka och hur talrika de band är, som knyter den enskilde till familjegemenskapen. Tills barnen når den ålder, då de får fast fot inom ett yrke och en viss personlighetens stadga, som gör att de kan lära sig själva, är mannen, hustrun och barnen så beroende av varandra, att en lösryckande av någondera betyder en katastrof för familjen såsom sådan.
Ur många synpunkter är det hustrun, som har den centrala platsen i familjegemenskapen. Hur viktig hustrun är visar t. ex. sådana fall där hon dör och där det är nödvändigt att snarast ersätta henne (genom nytt gifte eller genom anställande av en hushållerska för att inte familjen ska

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Högläsning och musik skapar sammanhållning mellan medlemmarna i denna familj.

hushålla olika nyttigheter kollektivt såsom mat, kläder, tvätt, barnuppfostran etc. har det ju visat sig och har omvittnats i många sammanhang, att en ganska långt gående familjehushållning ändå blir det för de normala inkomsttagarna billigaste, ja enda möjliga. Men framför allt ligger storfamiljens roll på det rent personliga planet — den blir den fasta och lugna punkten inom en genom stadens förvirrande mångfald av resurser komplicerad tillvaro. För dem, som arbetar inom stadens mekaniserade och specialiserade yrken, ger familjen ofta den enda kontakten med levande människor i deras alldagliga men ändock dag från dag skiftande tillvaro. För den som dagligen och stundligen, på arbetsplatser, i kommunikationer, vid kontakter med främlingen tvingas att antaga en viss spänd och onaturlig attityd, att tala och uppföra sig med aktgivande på effekten av sina ord och handlingar (man måste vara »artig», man får inte verka »skrytsam», man får inte vara »medlidsam», man måste dölja sina misslyckanden etc.)

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Fig. 4

Throughout the text, Åkerman formulates domestic space as a highly efficient apparatus to mold individual bodies, shape their behavior and influence their desires, ultimately bringing them together as *the ordinary, decent family.* This particular idea is emphasized in the thematic organization of the book, which sees Åkerman hinge the study and its findings around four topics, including the definition of *the ordinary family*. The result is best summarized as a thorough description of a nuclear heterosexual domestic structure, which Åkerman recommends Swedish families adopt. She includes a clear definition of each character in the family unit, including the housewife, the good man, the toddlers and younger school children, as well as the older youth. The definition includes how these family members should look and behave, and what domestic activities are expected of each. Turning to the physical space, she analyzes how apartments are furnished and the obstacles this can present in the creation of *the ordinary family.* This informs suggested improvements to the spatial and material organization of the house —form, area, the equipment in rooms, how this equipment is arranged in the space— that will induce the proper production of each role, the performance of their character, the movement of their bodies and the construction of their sexual identity.
Åkerman's recommendations institutionalize the use of domestic space as a political tool for articulating two basic forms of power over the lives of individuals, just as Foucault outlined and Léoty intimated in his corsetry manual; that is, the subjugation of bodies and the control of populations.
The first form of power considers the body an instrument. Foucault explains: "Its disciplining, the optimization of its capabilities, the extortion of its forces, the parallel increase of its usefulness and its docility, its integration into systems of efficient and economic controls, all this was ensured by the procedures of power that characterized the *disciplines*: an *anatomo-politics of the human body*." (Foucault 1981, 139).
Åkerman interprets the architectural form of the house as a means to validate and reinforce the heterosexual middle-class white reproductive family as the dominant discourse. In this scenario, it is considered *normal* for ordinary men and women to unite in pairs, to work together, to diligently provide

for their children and to give them peace and security until they can manage on their own. The normal thing for the young person who is preparing to leave the parental home is to spend a few years playing at independence before the seriousness of life begins in earnest.
As with the corset, domestic space in Åkerman's formulation operates as an exoskeleton. It regulates the feminine and masculine anatomy, molding the body's needs from the outside, imposing an efficient physical and sexual literacy and inducing sexual reproduction. The home is where sexuality is confined, normalized and governed. As Foucault unfolds four decades after Åkerman publishes her research and recommendations, the legitimate and procreative couple was taking custody of sexuality and absorbing it in the serious function of reproduction: "A single locus of sexuality was acknowledged in social space as well as at the heart of every household, but it was a utilitarian and fertile one: the parents' bedroom. (…) Sterile behavior carried the taint of abnormality; if it insisted on making itself too visible, it would be designated accordingly and would have to pay the penalty" (Foucault 1981, 3-4).
Like the parents' bedroom, the kitchen is viewed by Åkerman as a space with strategic potential. The architectural form of the space, the machines and furniture to equip it and their placement have the capacity to dictate the female body's movements, a choreography that informs her role and anchors that role within a constructed and fixed subjective identity. The domestic space of the kitchen, of the bedroom, of the living room, together with the commodities that qualify them, are conceived as spaces where personal desires and the system of reproduction intersect. In this way, the house can be interpreted as an apparatus external to the body, a mediator between the individual and society in the process of constructing the personages of the disciplinary modern society.
The second form of power concerns the control of populations. Foucault considered this to be the basis of the biological processes: "propagation, births and mortality, the level of health, life expectancy and longevity (…). Their supervision was effected through an entire series of interventions and *regulatory controls: a biopolitics of the population*." (Foucault 1981, 139).
Orthopedic politics mapped out in Åkerman's study activated domestic space as the most effective site to invent and fix the somatic fictions of sexual epistemology constituting the basis of the biopolitical modern regime. The organization of the *ordinary, decent family* came to be regarded by Åkerman as an indispensable instrument of political control and economic regulation for Swedish society. Her study on the material and spatial conditions of domestic life and their implications for the family's growth and wellbeing revealed domestic space as a strategic artifact for capitalism and, as Foucault describes, "the controlled insertion of bodies into the machinery of production and the adjustment of the phenomena of population to economic processes". (Foucault 1981, 141).
Through the ortho-architectural exoskeleton that is the house, Åkerman recommends surveillance be institutionalized at a national level: "In the present moment, our childless and our families with one and two children mean that our people are shrinking at such a rapid rate that in a generation it will have decreased by a quarter. If we really want to live on as a people, we must realize that strengthening the family is as important as strengthening the military defense. (…) The family is alive, but it is too crowded, both spiritually and materially. We need to expand homes. We need to give the people who build homes more materials to build from. Housewives must have training for their work. Both husband and wife need to know more about how to deal with children and adjust to them. (…) And we must provide families with housing that does not squeeze them together" (Åkerman 1941, 239).

Conclusion

In an attempt to flee abstract diagrams of power, this article identifies two physical manifestations of the power exerted over individuals and populations: the Victorian corset and the post-war domestic space in Sweden. Both mechanisms administer power in ways that produce specific desires, identities and familial assemblages. They are fictions realized through the regulation of the feminine and masculine anatomy and its movements, the imposition of physical and sexual literacy and the instigation of procreative conduct that is produced, repeated, normalized, governed and replicated through an expansive network of domestic architecture (the term *domestic* referring to the spatial atmosphere of the home as well as the intimate architectural forms that involve the family). In their interaction, these fictions function as a gigantic orthopedic laboratory: a disciplinary matrix where different entities —subjects, families and populations— are engineered.
By juxtaposing Léoty's *The Corset Through the Ages* and Åkerman's *The Family that Outgrows its Home* we find examples of knowledge creation in laboratory conditions. In both, heterosexual middle-class white man, woman, family and society are thus the deliberate output of the disciplinary regime toward the reproduction and colonial expansion of controlled producer/consumer human life on the planet.
This understanding of knowledge creation is relevant to a Foucauldian's analysis of the modern architecture's origins, specifically in terms of the *biopolitical machine*. In other words, it casts modern architecture as an instrument for the production of man, life and order. When modern Swedish domestic architecture addressed what it means to have a body, to live and to be a sexualized subject, but also what it means to be part of a population as a sexualized body, it is assuming its role as an integral part in this machine.
This reading of biopolitical power and its material manifestations offers a useful way to critically evaluate architectural structures in terms of spatial regimentation and the administration of everyday life where they impact the process of physical and political normalization, the process by which people in their plural acceptation become docile bodies. Studying the Victorian corset and Åkerman's Swedish home through this lens offers a glimpse of the ways orthopedic politics in the disciplinary regime has kept this process unchecked.
It also indicates the extent to which architecture relies on techniques of physical and political normalization. Architecture produces subjects and subjective experience inherently through the construction of lived experience, meaning its impact is felt in every possible way on the human body and human desires.
However, as Wallenstein teaches us, the space that lived experience opens is equally a fissure or a space for resistance and transformation (Wallenstein 2013, 38, 40). Understanding of the spatialization of power dynamics reveals the central role architecture form had in the disciplining of society in modernity but also in undermining power structures.

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Notes

1 “The man walks smoothly between home and workplace and back to home, gets his food, reads his newspaper, talks a little about yours and hers, listens to the radio, and sleeps a long night in half of the ottoman between the table and the buffet.” (Åkerman 1941, 236).

2 “Housewife strives in her daily work with unmade beds, smeared counters and worries about what she should come up with for dinner. Sometimes she meets acquaintances to talk away for a while over a cup of coffee, usually she is quite alone and one day sees the other go the same way. She keeps the shiny surfaces of the furniture constantly spotless, not a speck of dust is visible on the photographic frames and the curtains fall in constantly just as neat folds.” (Åkerman 1941, 236).

3 “The baby, who is standing in his bed between the radio and the linen closet, the nappies hanging to dry on the heat pipe, makes a little mess in the home. She crawls around between the furniture and must be guarded in one, so that she does not fall over anything. When she can go out in a neat little coat, her mother sits among other mothers and watches over her at the pile of sand. When she starts school, her mother sees her clothes every night and interrogates her homework. When she is confirmed, she receives a gold bracelet, and the photograph of her with flowers in her arms is put up on the desk.” (Åkerman 1941, 237).

Image Captions

Fig. 1. Cover of an original edition of the book *Le Corset à Travers les Âges (The Corset Through the Ages)*. 1893.
Fig. 2. Left. Plate VI, Toilet. From *Le Corset à Travers les Âges* (Léoty 1893, 61). Right. Plate XVII, Modern Corset. From *The Corset Through the Ages* (Léoty 1893, 99).
Fig. 3. Cover of an original edition of the book *Familjen som växte ur sitt hem (The Family that Outgrows its Home)*. 1941.
Fig. 4. Left. “When family members become family.” From *The Family that Outgrows its Home* (Åkerman 1941, 208). Right. “Reading aloud and music create cohesion between the members of this family.” From *The Family that Outgrows its Home* (Åkerman 1941, 211).

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Biography

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“Disprogramming,” “Plan-less,” “Non-movement,” “No Style”:
Dialectic Strategies in the *Shinkenchiku* Residential Design Competition (1965–2019)

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Abstract

A provocative competition theme set by a single judge is the key to the success of the long-running *Shinkenchiku Residential Design Competition* (1965 to present), a yearly housing ideas competition from Japan that has seen more than 17,000 entries from around the world. From Bernard Tschumi to Kengo Kuma and Rem Koolhaas, judges in this international competition have frequently used the dialectic principle in writing up their competition brief as a means to position themselves in ongoing architectural debates. By deliberately starting from the negative entity – *dis*-programming, plan-*less*, *no* style – these judges aimed to stimulate contestants to think anew about the more commonly used notions of “programming”, “plan” and “style”.

This paper examines the intricate competition logic behind the *Shinkenchiku Residential Design Competition* to illustrate how these dialectic strategies have successfully resulted in solutions not contained in either “plan” or “plan-less,” “style” or “no style”.

It takes as a tangible case study, the 1996 edition of the competition in which judge Kazuyo Sejima set the theme of “possibilities of non-movement” and challenged contestants to investigate the static aspects of architecture in a world increasingly dominated by speed, new media, and interchange. Instead of considering this immobility as a limitation, “non-movement” served Sejima well to think anew about “movement”, a strategy with which she challenged other architects to widen the possibilities of architecture.

Through a detailed analysis of the twelve winning entries (viewed as different cultural responses/translations of the common design problem) and the judge’s final comments (understood as a more nuanced understanding of the original competition theme), as well as the published the winning entries and the final remarks this paper aims to shed light on how different solutions to the problem of “movement’, propelled by “non-movement”, opened up new, global perspectives on housing in an age of rising digital technologies.

Keywords: housing ideas competition, single judge, competition brief, Kazuyo Sejima, non-movement

“Disprogramming,” “Plan-less,” “Non-movement,” “No Style”:
Dialectic Strategies in the *Shinkenchiku* Residential Design Competition (1965–2019)

In 1965, the editors of the Japanese architectural journal *Shinkenchiku* launched an international housing ideas competition to rejuvenate its long-running magazine.[i] Inspired by a series of competitions for low-budget “minimum houses” that were previously featured in the magazine in the wake of the Second World War, the *Shinkenchiku* Residential Design Competition was intended as an avant-garde section in what was otherwise a conservative architectural magazine.[ii] Exciting design proposals from young architects responding to renowned architects serving as judges were to attract a new and younger readership. This competition, which had no intention of resulting in a build works, was launched during a phase of crucial momentum in the internationalization of Japanese architecture culture.[iii] Bi-lingual from the beginning, the competition was to serve a double function. On the one hand, the competition would help propagate Japanese architectural culture as Japanese architects who were at the forefront of architectural production were, in their role as judges, able to promote their ideas by setting without restrictions competition themes according to their wishes. This effect was amplified when the competition materials reached a foreign audience through publication in the English-language magazine *The Japan Architect*. On the other hand, the competition helped activate the local Japanese housing debate with fresh ideas from abroad. Well-known foreign architects serving as judges incited the Japanese debate with provocative competition themes and of course, the multi-cultural responses from participants around the world, published in the Japanese-language magazine *Shinkenchiku*.

This paper examines the *Shinkenchiku* Residential Design Competition as a productive cross-cultural medium of negotiation and exchange in which different actors and stakeholders have collectively produced architectural knowledge. It elucidates how the knowledge exchange in this competition is regulated by a hierarchic and yet surprisingly open competition logic, which consists primarily of a judge setting a competition theme against the background of ongoing international debates. Setting the theme is followed by the submission of different competition entries, which can be viewed as different cultural responses to the judge’s call. The submissions illustrate diverse interpretations of a common design problem and in turn, contribute to the judge’s concluding remarks, which offer a more nuanced understanding of the original competition theme. In short, the *Shinkenchiku* Residential Design Competition offers the ideal test case to understand how an international ideas competition functions as a cross-cultural architectural ‘contact zone’ between the judges, the contestant, and the readers and in which architects such as Peter Cook (1977), Charles Moore (1978), Philip Johnson (1991), Renzo Piano (1993), Jean Nouvel (1995), Kenzo Tange (1966), Arata Isozaki (1975), and Toyo Ito (1988, 2000) were able to put forward crucial observations about contemporary developments in society.[iv]

When reviewing the long list of judges and their respective competition themes in the 49 editions to date, one cannot ignore the frequent use of the dialectic principle in articulating a competition brief. For example, in 1989, Bernard Tschumi set the theme as “disprogramming” as a counterreaction to received ideas on what constitutes the “program” in architecture.[v] In 1995, Jean Nouvel envisioned the competition to open new fields for architecture by setting the competition theme as “The opposition of simplicity versus complexity.”[vi] In the search for a ‘modernity of to-day’, he challenged contestants to come up with strategies that put a growing complexity into much simpler forms. Rem Koolhaas joined the Modernists in their rejection of style by launching the dispositional theme of ‘House with No Style’.[vii] In line with his habit of undermining architectural conventions with “anti-architecture,” or an architecture that refuses to behave as it should, Koolhaas set this provocative competition theme in 1996. With this act, he called on contestants to come up with methods on how to shed style and stop the automatism of simple form-making for the sake of it. In 2006, Kengo Kuma used the competition to share his doubts about the way architects nowadays plan the interior of a house using walls. Skeptical about the way walls rigidly divide a lifestyle within a house, Kuma launched his interests in a ‘plan-less’ condition. What all these examples have in common is that they deliberately start from the negative entity—*dis*-programming, plan-*less*, *no* style—as a means to stimulate contestants into thinking anew about the more commonly used notions of ‘programming’, ‘plan,’ and ‘style’.

This paper explores the intricate logic behind the *Shinkenchiku* Residential Design Competition in order to illustrate how the dialectic strategies proposed by the jurors have successfully resulted in solutions not contained in either ‘plan’ or ‘plan-less,’ ‘style’ or ‘no style’. It takes as a tangible case study the 1996-edition of this competition, in which judge Kazuyo Sejima set yet another dialectical theme, namely that of ‘The Possibilities of Non-Movement’. Observing the increasing domination by speed, new media, and interchange, Sejima confronted contestants with the static aspects of architecture. Instead of considering this immobility as a limitation, ‘non-movement’ served Sejima well to think anew about ‘movement’, a strategy with which she challenged other architects to widen the possibilities of architecture. What can a dialectic strategy as used in the *Shinkenchiku* Residential Design Competition tell us about the possibilities of an architect to position oneself among peers as well as of triggering a creative thought process among contestants?

The Possibilities of Non-Movement

When Sejima in 1996 was invited to serve as a judge of the *Shinkenchiku* Competition, she had already made a name for herself by winning prestigious prizes in Japan, including the Young Architect of the Year Prize in 1992 from the Japan Institute of Architects.[viii] Her work had also entered foreign media, of which a special issue of *El Croquis* on her built work in Japan played an important role in spreading her fame outside Japan.[ix] Aware of the highly globalized environment in a new digital age, Sejima introduced her competition brief of the *Shinkenchiku* Residential Design Competition [Fig. 1] as follows:

> Today, our lives are becoming freer from physical restrictions as well as time constraints through the various networks brought about by new media. We can see that everything has become informationalized, speed has become increasingly faster, and various forms of interchange have become possible. However, architecture does not move.[x]

While architecture’s static aspect at first might be seen as a hindrance to this movement, Sejima simultaneously recognized opportunities for design in the tension between architecture’s static aspect and a rapidly changing society. As such, she formulated her competition brief in such a way that it redirected contestants into going beyond a mere solution that reflects either movement or non-movement. She continued her brief by putting the static in opposition to the dynamic:

> Rather than being a restriction, can this non-moving aspect not be thought of as actually widening the possibilities of architecture? Is it not possible to give birth to a stationary architecture that relies on this environment brought about by the various media, instead of one that ignores this environment?[xi]

Sejima’s 1996 edition of the competition coincided with the emergence of digital architecture and the exploration of architecture beyond cubic volumes. One of the first architects who believed that the new electronic technologies would affect architecture was Peter Eisenman. Two seminal publications, ‘Visions Unfolding: Architecture in the Age of Electronic Media’ (1992) and ‘The Affects of Singularity’ (1992) published in *Architectural Design*, illustrate Eisenman’s belief that the invasion of new media into every day called into question the nature of reality.[xii] The shift to electronics defined sight no longer in terms of technologies of mechanical reproduction but in terms of media and simulation. This destabilization of vision was nerve-breaking but at the same time inspiring for the field of architecture as it asked for an alternative to ‘the gridded space of the Cartesian order’. Another early advocate of computer usage in search of a new architectural expression was Greg Lynn, a former staff member of Peter Eisenmann’s office. Lynn heralded round shapes and smooth surfaces that flourished during the second half of the 1990s. He readily accepted advanced materials and technologies for design and fabrication, which soon made him a protagonist in the expression of digital making in the field of architecture.

What was certain, according to the architecture historian Mario Carpo, was that this “digital turn” from mechanical reproduction to new electronic technologies created a belief among architects in the early 1990s that electronics would drastically change the making of physical buildings.[xiii] With questions such as ‘Can virtual reality and cyberspace function as an alternative to physical space?’ or ‘Will the new electronic venues designed in bits and bytes replace buildings that are built in bricks and mortar?’, architects dreamed of realizing a new architectural expression. The curved Water Experience pavilion (1993) by Lars Spuybroek/Nox is a clear visualization of that will among architects to translate virtual spaces designed on the computer into material reality.[xiv] The beams of this information pavilion are connected in a non-linear fashion in a sincere attempt to resemble the natural-looking curves of the computer rendering. The invention of computer-aided design (CAD) and computer-aided manufacturing (CAM) significantly improved the possibilities of creating curved lines in built form. The realization of Norman Foster’s elegant geodesic glass dome over the Great Court of the British Museum (2000) would not have been possible if its steel rods weren’t individually computer-generated. Notwithstanding the rapid development of CAD and CAM techniques, digital media were still a sensation rather than an everyday affair at the time Sejima launched her competition brief. Although electronic mail and computers were making their entrées into architectural offices, it wasn’t common practice yet to actually design with computers. Sejima’s staff-member and current partner Ryue Nishizawa recalls the first digitalization of the office around 1994.[xv] The arrival of the first Macintosh Quadra computer coincided with a commission for the Gifu Kitagata Apartment building. Astonished

by the shortcut option of duplicating sequences (Option + Command + D), Nishizawa started reproducing room units until he hit the genius idea that laying out room units worked better than laying out household units. The power of the Gifu Kitagata Apartment became the repetition of identically shaped, small-sized room units that were 2.8 m wide, which were only in a later stage divided and distributed to reflect diversity among households.

Discussion on media and digital technologies among architects in Japan was certainly stirred when Toyo Ito completed his Tower of Winds (1986), a 21-meter-high technological sculpture built in Yokohama city that addressed the effects of digital media and information technology on built form. The cylindrical tower which houses water tanks that serve as air conditioning machinery for an underground mall embraced technology as much as it established a direct symbolic relationship between nature and the installation. Clad in perforated aluminum panels, the Tower of Winds actively converts sound and wind into the light. The importance of computers in generating new structures was tested on a grand scale in the design of the Yokohama International Port Terminal. Launched in 1994 as an open competition by the city of Yokohama, and with a 'start-architect' jury including Arata Isozaki, Toyo Ito, and Rem Koolhaas, the competition attracted no less than 660 entries from 41 countries.[xvi] The ultimate winners were the young and ambitious Fashid Moussavi and Alejandro Zaera-Polo who, in collaboration with structural engineer Cecil Balmond, proposed an innovative structure consisting of a series of three undulating planes intersecting each other.[xvii] The strength of the structural system, made of folded steel plates and concrete girders, minimizes the need for vertical supports and allows for a mostly open floor plan, while the height of the structure allows for a spectacular variety of ceiling conditions in the interior spaces. What Moussavi and Zaera-Polo's design made clear we're not only the new possibilities of a nonlinear building but also the understanding that geometric and constructive complexity could not be achieved without the assistance of digital tools. With its striking dynamic appearance, the port terminal quickly ended up becoming a new icon of the digital age.

Cross-Cultural Responses

After encountering the 439 competition entries (272 from Japan and 167 from elsewhere), Sejima selected 12 winning schemes; one first prize, six other prizes, and five honorable mentions. The selection of multiple winners is emblematic of this competition, demonstrating that the competition was set up from the start as a platform of discussion rather than the search for a single right answer. In her judge's comments, Sejima elucidated three general approaches to the subject matter of 'The Possibilities of Non-Movement'. The first approach came from contestants who established a dialogue between things that move and things that don't move. Their entries contrast the non-moving building with moving appliances (moveable screens and partitions, curtains, furniture) to suggest an architecture of change. A second approach was embedded in the proposals that layered the virtual space of media and computer 'cyberspace' over non-moving constructions and with that contrasting 'things that move' with 'things that don't move'. A third approach was rooted in proposals that introduced a non-concrete system such as an urban or media network to suggest an urban lifestyle, a house diagram, or the like. Yet looking at the 12 winning schemes, Sejima also admitted that actually, "none of them fit neatly into any of these classifications".[xviii]

Sejima's call for non-movement in a dynamic environment that is still surrounded by stable architecture, led Croatian architectural duo Vinko Penezić and Krešimir Rogina to take up the theme of nature. "In nature," Rogina explains, "everything is on the move but still appears as a very stable and infinite system."[xix] Inspired by 'sameness' and 'planarity' embedded in traditional Japanese patterns that Rogina encountered first-hand in Japan—ranging from fabrics to gardens and pavilions—he came to the insight that architecture is in fact a form of nature. For the competition, he and his partner Penezić started drawing spirals as a planar pulsation that ended up as a geometric structure 'fractured into a thousand pieces'. At first sight, it is not clear whether the model submitted for competition [Fig. 2] depicts an entire whole city or merely a single house. The planar surface of the model oscillates up and down while the cuts and cracks in the surface are a substitute for traditional building elements such as columns and slabs. "Digital processes are like natural processes and evolve exponentially rather than mechanically," explains Rogina in his response to the competition brief. Their architecture of emergence and disappearance follows exactly these natural processes. For Sejima, the entry submitted by Penezić and Rogina illustrated an attempt to recreate through architecture both the static quality of nature as well as the constantly changing diversity within it. Instead of juxtaposing architecture and media like many other schemes, Penezić and Rogina juxtaposed architecture with nature. With that, they added the idea of 'technological disappearance' to discourse in an age when technologies were considered as something that should be visible. The resulting dynamism within this scheme delighted Sejima.

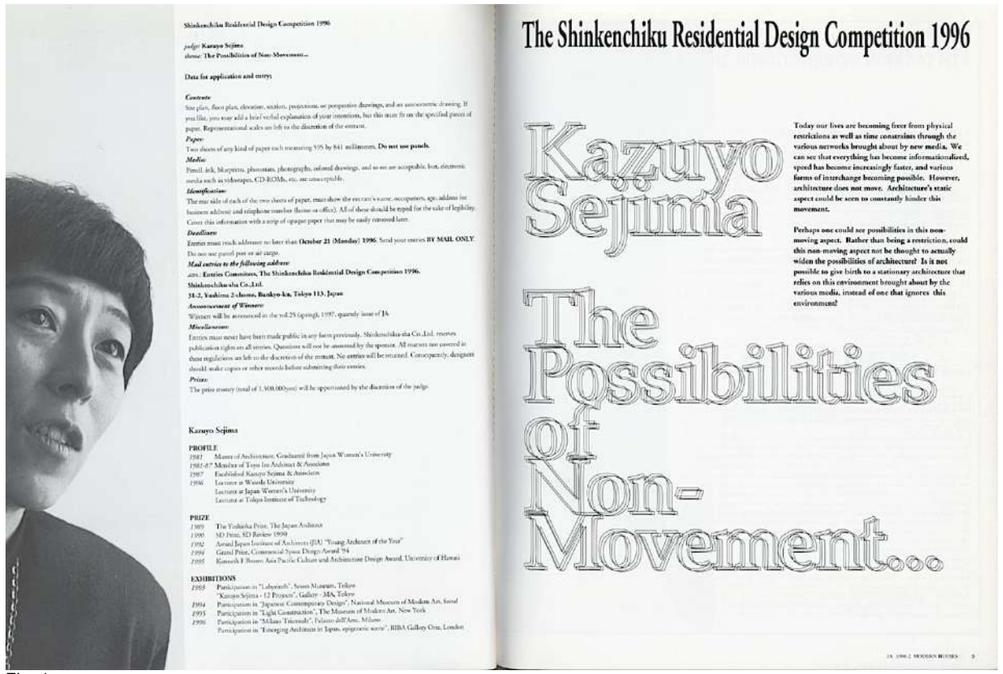


Fig. 1



Fig. 2



Fig.3



Fig.4

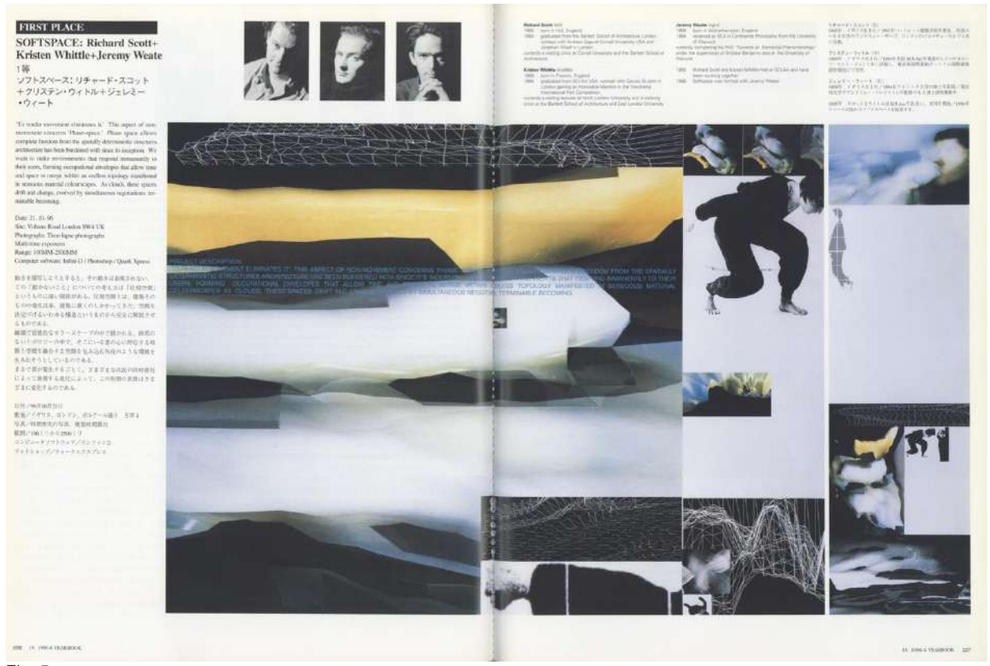


Fig. 5

Jurgen Mayer H. didn't participate in the competition to design for the topic but felt he already had a good response at hand with his thesis project from Princeton University.[xx] Taking the ephemeral qualities of Sejima's own work as a clue for a person who would be able to understand his project (and in this ability, be able to respond to his entry), Mayer submitted a project [Fig. 3] that dealt with weather, specifically weather conditions, and climate issues. Contrary to most other submissions which remained rather conceptual, Mayer's entry depicts a real house. This house operates as an apparatus through which information about the surrounding environment is gathered. Mayer represents the house as a calendar to suggests that every month comes with a different set of phenomena in architecture. Everything that is usually considered a failure in a building—think of leakage, interior heat, extension, or contraction of building materials—turns into something positive in Mayer's proposal. Waterdrops from a leaking roof help fill the bathtub underneath. Condensation on a wall, which appears when it is humid inside and cold outside, is used as a means to create privacy with less transparent walls. Friction on the floor will make the house warmer while moving down into the house will get you in a colder area. As such, Mayer's entry is about exploring the tension between 'non-movement' and 'movement' through the idea that the house is a space that binds you to a place (static), while the conditions around you (materials contract, distract, condensates, leak) make your imagination move. In short, the house responds to the environment, while you experience that response as an interactive force tied to a specific location and environment. The idea of non-movement is confined in the experience that once inside the house, things around you move, activate, or perform.[xxi]

With digital technologies, an increasing amount of diverse information is available to us without moving from our seats. How will these new technologies influence the materiality and the perception of architecture? [xxii] Jean-Phillip Lanoire responded to this question with a pavilion for architectural exhibitions that had an interactive interface. Equipped with LCD screens, the images of the exhibition reflect on the "skin" of the rectangular glass box, making the content of the exhibition the container of the exhibition as much as the container becomes the content of the exhibition. As such, Lanoire provided the director of this exhibition space with the power to change the architecture of the building: the selection of information on display determines the image of the building. The building, therefore, is not merely a container of information but one that can turn information into architectural material. Lanoire explains that the project came about as 'a sort of destruction of architecture itself.' Viewed on an urban scale, the static building becomes 'alive'. Inside, the building allows you to connect to any other global network of buildings dedicated to architecture, thus making the material of the building one that has simultaneously movement, provides information, and is connected to places that are elsewhere.

Michel Zaan and Shiuan-Wen Chu understood the competition as an incentive to ask questions rather than providing clear-cut answers and proposed a realistic house design. Defining architecture as a mediator between its inhabitants and their environment, they were of the conviction that architecture can, on the one hand, facilitate every practical bodily need and on the other hand, the environment. “In our entry, we have researched how the different media (old and new) define the context and how architecture functions as a medium between the inhabitant and that context,” Zaan explains.[xxiii] “This leads to both possibilities and impossibilities; it could mean the end, but also a new beginning for architecture.” Using 32 diagrammatic images of houses, Chi and Zaan researched the ways in which the body and the mind, each in its own way, were related to their environment and in what way architecture can facilitate or hinder these relationships. “At some point, architecture becomes meaningless in its relation to the extended environment. At some point, even the body becomes meaningless to the mind or at least, a burden in the mind’s constant will to move,” Zaan explains how the entry makes a distinction between the *body* and the *mind* of the architecture’s inhabitant to define various relations with the environment. “Was the body a carrier of the mind, now with the assistance of various new media, the mind’s constant will to move condemns our body to be static.” [xxiv] The charm of the proposal by Chu and Zaan, according to Sejima, was that it is not only capable of producing endless variations but that it also suggests their limitations.

Attracted by this competition’s focus on abstract ideas rather than physical objects, Pornchai Boonsom and Jarrod Broussard submitted a scheme that starts off with the idea that “nothing in motion can be understood without static reference points.”[xxv] They illustrated their idea not with a single house design but rather, with a city map that explores the tension between movement and non-movement. In the first panel, the buildings in black represent static reference points while the white open spaces signify fields of dynamic systems. In the second panel, they reversed the colors to highlight the tension between the open spaces in motion and their respective static borders. With the now-black areas defined as being in motion, the now-white areas are conceptualized as the channeling forces that contain and define motion. “Since movement and non-movement are interdependent,” Boonsom explains, “exploring the possibilities of non-movement was simultaneous to explore the possibilities of movement. I noticed that this was applicable to both natural and man-made environments, which led me to develop my city layout.” What struck Sejima as particularly stimulating about this submission was that it contained an abstract quality of thinking in the formalization of the distinction between non-movement and movement.

Emergent technologies were also key to the proposal of Shahed Saleem and Stefan White [Fig.4]. Inspired by his time during transit on his way flying to the United Arab Emirates, Saleem realized that nothing in airports has any kind of fixedness to it; rather, everything is continuously moving. “The architecture of airport terminals gives an illusion of stability but is, in reality, just a fluid place where people pass through,” Saleem explains.[xxvi] In response to this non-fixedness, Saleem and White proposed an alternative transit lounge, one with an egg-shaped structure that is detached from the actual ground. Upon arriving at their point of transit, airplane travelers do not arrive in an airport terminal but step into these kinds of transit lounges and are then immediately brought to their next airplane. A series of these egg-shaped lounges floating in any environment result in a transit-landscape in which there is no recognizable reference point to nation or nationality. The extremely simple and realistic scheme caught Sejima’s attention for it investigates the possibilities of movement while maintaining a consistent horizontality.[xxvii]

Sejima was ultimately awarded first place to a collaborative submission by the artist Richard Scott, architect Kirsten Whittle, and philosopher Jeremy Weate for a proposal [Fig. 5] that relies on the concept of “when everything moves at the same speed, movement is rendered invisible.” Interested in exploring the possibilities of new spatial geometries made possible by new computer software, the contestants' used computer software to break free from the traditional formulae of architecture and to evoke a new type of architecture. Although the team made use of rather primitive digital means—the graphic software Infini-D, Photoshop, and Quark Express along with color contouring to create a three-dimensional flow of what was photographed, their intention was to take analog information and then find a way to convert it. The resulting entry, Softspace, is a series of time-lapse photographs with multiple exposures of the mundane action of Scott drinking tea. In the conversion from regular to time-lapse photographs, the contestants tried to find a way to specialize the flow of the movement and thus, actualize their theory. The resulting image displays a “phase space”, an environment that responds immediately to its users, forming occupational envelops that allow time and space to merge as “clouds that drift and change’. [xxviii] While the entry was not designed using 3D software, the new computer technologies were considered important to be able to change reality and create an actual environment from it. What stroke Sejima about this project was that it not simply describes the effects and characteristics of the space resulting from a dialogue between movement and non-movement. The

strength of the project lies in its ability to equally put forward the conditions for the realization of a diagram of the dialectic between non-movement and movement.

Conclusions

The 1996 competition edition The Possibilities of Non-Movement…’ judged by Kazuyo Sejima instigated a lively discussion about the opposition between movement and non-movement. The diversity of responses to the competition illustrate how much the discussion on architecture was affected by new digital media in different modalities and appearances and how far one could go using technologies that were not at their disposal even yesterday. While the world was getting excited about the new possibilities generated by movement, Sejima challenged contestants with a rather poetic statement upon architecture, its static nature, and its problematic relationship to the modern context “generated by new media.” What seemed like a very mundane question at first—architecture is static—turned under the moderation of Sejima into an eternal question on substance and form. As such, Sejima’s call was a tactful introduction into space-making and the performance of space, one not based on program and the diagrammatic force of how a building can operate in terms of its programmatic layout. Despite the awareness of the new possibilities that digital media could offer architecture, Sejima was not looking for “digital architecture” per se. Yet, her introduction of the dialectic in the competition served her well for two reasons. By contrasting the new media conditions with the age-old static condition of architecture, Sejima pushed the contestants in a certain direction that would result in much more interesting solutions than merely asking for an exploration of “non-movement” or “movement”. Secondly, it helped her to further position herself as an architect who not simply rides the waves of the curvilinearity discourse, but instead carefully considers the reciprocity between “what stands still” and “what moves” in the design of new environments.

Notes

1 Shinkenchiku translates into English as “New Architecture”. The architectural magazine was first launched in 1925.

2 Starting with the *12-tsubo house* competition in 1947, *Shinkenchiku-sha* launched five house competitions between 1947 and 1949 that each asked for the elimination of the “feudalistic” aspects of the traditional Japanese house. Addressing themes such as “reduction of housework,” “child raising,” and “rationalization of tidying up,” the competitions were unique in that they required architects to analyze lifestyles prior to design. Uchida, Seizo. “Sengo chokugo ni miru jūtaku kompe” in *Gendai kenchiku no kiseki: 1925–1995 shinkenchiku ni miru kenchiku to nihon no kindai*. Edited by Jun Hashimoto. Tokyo: Shinkenchikusha, 1995: 159.
Shinkenchiku magazine became especially conservative and neutral in observation after a dispute caused by the publication of an article on the Sogo Department Store in Osaka (1935) that was designed by Togo Murano. The dispute resulted in the discharging of the editorial staff, after which the magazine was afraid to be critical again. Interview between author and *Shinkenchiku* editor Takeshi Ishido. Tokyo, November 28, 2018.

3 Japanese architects started to gain a bigger role in the international architectural debate in the early 1950s and were confidently participating in it by the time the *Shinkenchiku* competition was launched. Some instances of Japanese architects during that time are as follows: In 1951, Kunio Maekawa and the young Kenzo Tange were the first Japanese architects to participate in the CIAM meetings (Hoddesdon). Tange gained world fame after completing the Hiroshima Memorial Peace Building in 1955. In 1956, Fumihiko Maki was the first to take the position of assistant professor abroad, at the Washington University in St. Louis, after graduating from the Cranbrook Academy of Art in 1953 and from the Harvard Graduate School of Design in 1954. Kiyonori Kikutake’s work was presented at the 1959 CIAM meeting in Otterlo. A lively ‘contact zone’ between Japanese and international architects was organized at the 1960 Tokyo World Design Conference. The 1964 Tokyo Olympics acted as an international showpiece of modern Japanese architecture.

4 Here, I borrow the concept of ‘contact zones’ from the literary studies scholar Mary Louise Pratt, who coined the term in the context of colonial studies. According to Pratt, contact zones are ‘social spaces where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power.’ Applied to the field of architecture, I envision contact zones as intense sites of encounter (competitions, exhibitions, congresses, biennales, summer meetings) between different architectural cultures in which ideas, approaches, and tools are negotiated, selectively borrowed, partially adapted, or rejected. Pratt, “Arts of the Contact Zone,” 34.

5 Bernard Tschumi, “The Shinkenchiku Residential Design Competition 1989 Disprogramming.” (Competition announcement). *The Japan Architect*, February 1989: 4-5

6 Jean Nouvel. “The Shinkenchiku Residential Design Competition 1995 Simplicity/Complexity.” (Competition announcement). The Japan Architect, 1995: 2-3.

7 Rem Koolhaas. “The Shinkenchiku Residential Design Competition 1992 House with No Style.” (Competition announcement). The Japan Architect, Summer 1992: 2-3.

8 Other notorious prizes for young Japanese architects Sejima won include the SD Review 1988 for Platform I & II and SD Review 1990 for Saishunkan Women’s Dormitory.

9 Monograph “Kazuyo Sejima 1988–1996”, *El Croquis 77*, Madrid : El Croquis Ed., 1996.

10 Kazuyo Sejima, “Shinkenchiku Residential Design Competition 1996: The Possibilities of Non-Movement …”. (Competition announcement). *The Japan Architect*, 1996-II: 3.

11 Ibid, Sejima: 3.

12 Peter Eisenman, “Visions Unfolding.” Eisenman, Peter. “Visions Unfolding: Architecture in the Age of Electronic Media.” *AD*, September–October 1992: xvi–xviii
Peter Eisenman, “The Affects of Singularity.” *AD* 62, November–December 1992: 42–5.

13 Mario Carpo, *The Digital Turn in Architecture*, 15.

14 Colin Davis, *A New History of Modern Architecture*, 440–441.

15 Ryue Nishizawa, “Creating Principles—Structure, Plan, Relationship, Landscape,” ‘Kazuyo Sejima and Ryue Nishizawa 1987–2006’:9. *GA Architect,* 2018: 9.

16 Sejima joined the competition herself with a design composed of a gently undulating slab that was the result of functional zoning. Starting from the road, the slab served as the guiding principle with which to bring people to the tip of the pier. Community facilities such as shops, cafes and foyers connected to the circulatory path made the terminal design into a ‘stroll type landscape garden afloat on sea’.

17 Juror Rem Koolhaas praised the design as an architectural experiment that investigated ‘a new, more fluent way of organizing flows using a freer language that can make the familiar exciting again’. For Isozaki, the work embodied an innovative idea transcending the stylistic/anti-stylistic pluralism that has spread around the world these twenty years.

18 Sejima, “Judge Comments,” *The Japan Architect*.

19 Interview between author and Krešimir Rogina. June 6, 2020.

20 Mayer considered the *Shinkenchiku* Residential Design Competition as an ultimate chance for a recent graduate to get international exposure and feedback from an internationally renowned judge. Telephone interview with the author, 19 June 2020.

21 Jurgen Mayer interests in weather and climate, body climates and performance of bodies developed throughout his career. Weather as a phenomenon was also clearly visible in a project like the Town hall in Stuttgart (1998).
Mayer did get some exposure with his *Shinkenchiku* Residential Design Competition, which was republished in Design Document (DD) Series 19, Seoul: DAMDI Publishers. Mayer’s competition materials are now part of the permanent collection of MoMA San Francisco. Telephone interview with the author, 19 June 2020.

22 Jean-Philip Lanoire, like judge Sejima, was one of 660 teams who submitted a design in the Yokohama International Port Terminal competition.

23 Interview between author and Michel Zaan. June 3, 2020.

24 Interview between author and Michel Zaan. June 3, 2020.

25 Interview between author Pornchai Boonsom. June 20, 2020.

26 Interview between author and Shahed Saleem. July 14, 2020.

27 Interview between author and Shahed Saleem. July 14, 2020.

28 Interview between author and Kristen White. June 15, 2020

Image Captions

Fig. 1. The competition brief for the 1996 Shinkenchiku Residential Design Competition written by Kazuoyo Sejima. *The Japan Architect* 1996-II (Summer): 2-3
Fig. 2. Second place entry by Vinko Penezić and Krešimir Rogina *The Japan Architect* 1996-IV (Winter): 228-229.
Fig. 3. Second place entry by Jurgen Mayer H. *The Japan Architect* 1996-IV (Winter): 232-234
Fig. 4. Second place entry by Shahed Saleem and Stefan White. *The Japan Architect* 1996-IV (Winter): 238-239.
Fig. 5. First place entry by Richard Scott, Kirsten Whittle, Jeremy Weate. *The Japan Architect* 1996-IV (Winter): 226-227.

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ADAPTATION
Ubiquitous and Monofunctional Modernist Residential District

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Abstract

In biological terms, adaptation is any alteration to the structure or function of an organism that results from natural selection and by which the organism becomes better suited to survive in the environment. Modernist residential districts are being spatially modified to adapt to contemporary cultural conditions. In turn, a range of architectural, urban, and landscape practices have emerged worldwide in the past quarter century. An understanding of these practices is urgent due to the large amount of existing Modernist residential districts reaching a critical point of disrepair, and the social, environmental, and economic benefits of adapting these architectures in comparison to a process of demolition and reconstruction.

This paper investigates the current situation of the ubiquitous and monofunctional Modernist residential district by reviewing the received perception of its failure in contrast with the spatial strategies of addition, subtraction, (re)programming, and camouflaging deployed to adapt these collective housing structures.

Although Modernist residential districts have been extensively studied, the understanding of their adaptations within a broad geographical scope has been limited. This consideration is important because it reviews the evolution of a unique spatial housing object over an extended period of time (+50 years) within the diversified cultures, climates, and legislations of the European, North and South American, African, and Asian continents.

By revisiting the Modernist residential district, we seek a better understanding of the potentials for housing adaptation as a medium for social, ecological, and cultural renegotiations in our cities.

Keywords: Adaptation, Revitalization, Collectivity, Housing, Resilience.

1. Introduction

The first decades of the twentieth century witnessed intense social, economic, political, and technological transformations. Modernist architects responded to these changes with a new vision of collective living: The Modernist residential district. Conceived as “public goods,” these housing programs were funded by the state to support the rapid urbanization of rural migrants. However, as welfarism was replaced by neoliberalism at the end of the century, governments abandoned the construction and maintenance of these housing structures. Today, Modernist residential districts stand in disrepair across the world, housing the working-class. Despite initial social and governmental enthusiasm for Modernist residential districts, the typology received consistent criticism from the design community. This paper offers a brief history of the Modernist residential district, examines the received failures of these housing structures (2. Physical determinism vs. Discourse insufficiency), contrasts its current status quo (3. Demolition vs. Adaptation), and analyzes through binary comparisons the four most frequent strategies deployed in the adaptation of Modernist residential districts (4. Addition vs. Subtraction and 5. (Re)programming vs. Camouflaging). The conclusion will elaborate on the perfectibility, drivers, and scalar renegotiations found in the adaptation of the Modernist residential district.

After the first Industrial Revolution, untold millions moved from the farms of the countryside to the factories of the city and New Towns. This rural exodus generated an ever-increasing demand for housing to accommodate the new workforce. Unable to find housing, migrants settled in unplanned slums. In response to the urban housing scarcity and insalubrity of makeshift neighborhoods, High Modernist architects and planners collaborated with politicians to envision a housing district of their own. Around 1922, Le Corbusier began to publish his tenets for the “tower in the park” based on the theories of Auguste Perret. He further elaborated on these theoretical studies for the *Ville Radieuse*. This master plan envisioned a city strictly segregated into uses. *L’habitation* was Le Corbusier's ideal Modernist residential district where “‘à redent” blocks were scattered onto continuous parklands. The extensive land would sponge the ground floor allowing healthful air and light into apartments. Housing would be densified through growth in height, and new dwelling patterns would redefine modern living. The Modern Movement received and deployed these theories as design dogmas.

After the end of World War II, the project of modernization fully engaged with the housing problematique. The global postwar Economic Boom endowed welfare states and planned economies with an unforeseen capacity to invest in housing reform. In the United States, the Housing Act of 1949, part of President Harry Truman’s Fair Deal, expanded the role of the federal government in both public and private housing. Its legislation authorized $13,000,000,000 in mortgage guarantees, $1,000,000,000 billion for slum redevelopment, and set a construction goal of 810,000 units of public housing[1]. Likewise, with its sixth Five-Year Plan (1956–1960) the Soviet Union sought to double the capital invested in housing. In doing so, the number of units across the nation increased from 1.5 million in 1956 to 2.7 million in 1959—the highest yearly total ever achieved[2]. In England, where almost four million British homes were destroyed or damaged in the War, the Parliament issued a Housing Act in 1946 that provided large subsidies for the construction of social housing. This resulted in the completion of over 800,000 local authority houses by 1951[3]. Simultaneously, Spain established its Ministry of Housing, which aligned the forces of the National Housing Institute, General Direction of Architecture and Urbanism, and the Direction of Devastated Regions to foster the country’s modernization. The National Plan of 1955 stimulated the construction of 550,000 housing units over the following five years[4]. In short, the post-war economic expansion (1945-1973) witnessed widespread governmental investment in housing —unprecedented at the time and unmatched since. — Modernist residential districts, pliable enough to suit any political ideology, became the most frequent spatial structure in city-making and, ultimately, the most widespread manifestation of Modern architecture.

However, the state support for social housing projects could not be maintained. As the Keynesian economic model of the Postwar Economic Boom proved unsustainable, nations began to favor free-market capitalism. By 1973, U.S. President Richard Nixon halted national funding for numerous housing projects and crafted new housing legislation that consolidated a market-based approach. Modernist architecture, dominated by its social ambitions, by planning, by the preference of collectivity to the individual, and ultimately embodied by the Modernist residential district, was at odds with the evolving capitalist society[5]. Although funding cutbacks varied across countries, in general, they resulted in inferior construction materials, lack of landscaping, and withholding of amenities. Those projects completed before state withdrawal experienced the removal of maintenance assistance. The effects of that removal were direr, the more modest the working-class inhabiting those districts was. Finally, many districts—especially outside of the United States of America—were privatized over the following years. In England, for instance, Margaret Thatcher introduced the Right to Buy in 1979,

allowing the sale of a million social dwellings to the private sector[6]. Throughout the ensuing decades, it became a usual urban practice for states to transfer their public housing stocks.

The Modernist residential district was the housing device that restructured society around modern productivity –Fordism– by providing the site for the allocation of mass-produced goods and homogenizing society. In spite of their mass construction, society's initial positive perception, or their remarkably consistent Modernist logic, language, and aspiration,[7] the Modernist residential district was subject to a great deal of criticism within the design community from the start and has never been considered "high architecture." The initial body of criticism was elaborated in North America and Europe. The most widely-read contemporary critics were Jane Jacobs, Reyner Banham, Aldo Rossi, and Charles Jencks. This criticism has been inherited and reinforced to our days.

2. Physical Determinism vs. Discourse Insufficiency

This section addresses the failure narrative that was constructed within the design community around the Modernist residential district. This narrative intertwined both Modernism and public housing to failure. It was forged contemporaneously to the construction of the Modernist mass-housing projects and has remained in the perceptions and discourses of our field for more than half a century. The initial body of criticism was elaborated in North America and Europe. Its most widely read critics were Jane Jacobs, Charles Jencks, Aldo Rossi, and Reyner Banham. Surveying these authors and looking into other commentators such as Robert Venturi, Colin Rowe, or the Situationists, two threads of critique to the Modernist residential district can be established: physical determinism and discourse insufficiency. The former defends that the poor design of these projects damned society. The latter sought to introduce new influences and contexts into their contemporary architectural discourse. Each thread will be compared through the analysis of its most representative critic: Jane Jacobs will enlighten the understanding of physical determinism and Charles Jencks the discourse insufficiency.

Physical Determinism: Jane Jacobs

The American Canadian journalist Jane Jacobs (1916-2006) was undeniably the most influential public figure against Modernist housing districts within and outside the design community. She embodied a unique voice against these architectures through the alignment, as two lines of the same attack, of writing and activism. As a journalist, Jacobs worked in urban planning assignments for the Architectural Forum Magazine from the start of the 1950s. After giving a speech on Modernist city planning at Harvard University in 1956, Jacobs received funding from the Rockefeller Foundation, as well as an affiliation with The New School. The support allowed her to conduct research on urban life and city planning in the U.S. which was ultimately published in 1961 as The Death and Life of Great American Cities. As an activist, Jacobs became the public figure in New York leading the resistance to the replacement of urban communities for the construction of Modernist residential projects through urban renewal programs. One of her most successful activist campaigns stopped the construction of the Lower Manhattan Expressway, which would have passed directly through the island's SoHo and Little Italy.

The Death and Life of Great American Cities connect the physical characteristics of the Modernist residential districts described as "too long[8]", "monotonous[9]," "oppressive[10]," "meaningless ground floor[11]",...– to raise social conflict and economic failure of the American city. Jacobs described the Modernist residential districts as "dead-from-birth, inert settlements[12]" that were "incapable of adjustments, adaptations, and permutations[13]." Ultimately, Jacobs understood the Modernist residential district as the "anti-city planning[14]" and a "wrong turn in the search of understanding[15]".

Discourse Inefficiency: Charles Jencks

It happened at 3:32 PM in St. Louis, Missouri, in July 1972. Pruitt-Igoe, the once-promising social housing complex, came tumbling down in a matter of minutes. "Boom, boom, boom." In Pruitt-Igoe's demolition, Charles Jencks saw not just the failure of two buildings, but the failure of an entire architectural movement. Pruitt-Igoe's destruction proclaimed the death of Modern architecture.

Jencks (1939–2019) received his architectural diploma from Harvard's Graduate School of Design in 1965. Subsequently, he developed a doctoral thesis, which would later become his first book, Modern Movements in Architecture (1973). In Modern Movements, Jencks surveyed the rich architectural plurality within Modernism from 1920 to 1970 and traced it to cultural and political shifts. The book contains a diachronic diagram named Evolutionary Tree that positioned diverse ideologies, architectures, designers, and events in proximity or distance, to evidence their mutual influences. For example, the terms "functionalism", "engineering", "constructivism", and Le Corbusier are found together within the decades 1920s to 1930s[16]. In contrast, "bureaucratic", "neoclassical", "megalopolis" and Wallace Harrison are placed together within the 1960s and 1970s[17]. Jencks associated the different realms to evidence their joint variations and evolution, which ultimately

questioned the meaning of the Modernist architecture fifty years after its original postulation. According to Jencks, Modernism was left "without much social content to symbolize" and other agents had come into play. Jencks' next written work, The Language of Post-Modern Architecture (1977), finally dated the death of Modernism and positioned himself as a theorist of the new architectural movement: Postmodernism. To date the extinction of Modern Architecture, Jencks followed the logics of the Evolutionary Tree diagram. He connected cultural and political events to architecture. The implosion of two blocks of Pruitt-Igoe's state-funded Modernist residential district (after only seventeen years from its construction), and the withdrawal of Welfarism (in favor of a capitalist market), to the termination of Modernism and its aspirations (public housing). He further elaborated on the unavoidable marriage between the production of architecture and the economic systems in which it operates[18]. Ultimately, the death of an architectural movement was proved and theorized through a shift between economic systems.

Finally, if we understand that the Modernist residential district remains the closest built-attempt to provide housing as a public good on a planetary scale, it is striking to find that the leading critics of Modernist mass housing –who experienced first-hand the rise and fall of these architectures, the downsizing of the states' role in society, and the accelerated commodification of housing next to neoliberalism– did not examine the social implications of the Modernist residential districts. Between Jacobs and Jencks there was little critical evaluation of the social implications that the withdrawal of Welfarism (defund, privatization...) caused to those dwelling within these projects. In her exploration of the economic aspects of the American cities, Jane Jacobs concentrated on spatial conditions such as scale or repetition of the districts and length of the blocks as problematic for the economic health of the district and the city at large. Likewise, despite structuring his criticism around a cultural change and widely discussing the fall of Modernist residential districts, and the transitioning ideologies, Charles Jencks failed to explore the social consequences that the withdrawal of the state support had on the communities. For this reason, the two threads of critique –physical determinism and discourse insufficiency–, become the two sides of the same coin: that of architectural determinism. To heed this determinism would assume that architectural design condemns society. When applied to Modernist residential districts, it implies that the districts –the closest built-attempt in history to provide housing as a public good – sentenced society to "death," "oppression," or "simplicity." This narrative is shallow and incapable of accommodating the global phenomenon of their adaptation that has emerged in the last quarter century and which ultimately evidences that Modernist residential districts are alive and in evolution through processes of adaptation.

3. Demolition vs. Adaptation



Fig. 1

Despite the great significance of the demolition of two slab-blocks in Pruitt-Igoe in 1972, Modernist residential districts have remained in place housing communities around the world to date. However now, these Modernist structures have reached a critical point where they are suffering from physical decay and cultural obsolescence. In doing so, they and have started to diminish their residents' lives. In response, two actions are being deployed: demolition or adaptation. In light of the vast amount of districts, their increasing degradation, and the recent accumulation of both demolitions and adaptations, a reconsideration of the Modernist residential district's social question is needed. Furthermore, the present existential challenges that the climatic, housing, and sanitary crises rise need to be considered at the core of the argumentation towards an action plan that structures the future of these and other collective housing architectures.

Demolition—followed by reconstruction—is a well-established step for economic reproduction within the built environment. The social output of this action is the eviction of pre-existing residents. The disruption of evicting the residents of Modernist residential districts – who are typically low-income and elderly – is huge. It requires not only forcing them to leave their homes, find a new place, and move belongings, but also the harmful discontinuity of their social network, through which they have acquired economic resilience and social identity. In addition, the action of demolition also implies repeating what happened to those communities ousted through urban renewal programs to build the original Modernist residential districts during the post-war decades. However, this time the driver of demolition is not the state building public housing but usually a private investor building for profit. Also, as many of these districts enjoy today central positions within the city, the demolition of Modernist residential districts is now a highly profitable real-estate operation for many investors[19].

Conversely, adaptation by not demolishing offers continuity to both the buildings and the existing communities. This is a critical point in the understanding of the adaptation of Modernist residential districts: this adaptation renegotiates the continuity of the material and social capital of these architectures. More recently, within the design discipline, the term adaptation has been paired to space, involving the design transformation of cities, villages, and rural areas to the impact of climate change. In this way, spatial adaptation has come to define urgency and survival within the built environment's design transformations. As if redesign or disappear. Modernist residential districts present this same urgency and vital need for adaptation. At stake is the continuity of their existing communities and invested natural resources.
The extensive accumulation of both demolitions and adaptations suggest that these architectures are experiencing a transitioning phase into contemporary ideologies and collectivity. The extraordinary breadth of adaptive strategies proves that physical decay can be overcome, and that design can strengthen a community and re-establish its comfort. Moreover, this is a global phenomenon. Increasing cases of Modernist residential districts adaptations can be found in Europe, America (North, and South), Africa, and Asia. In doing so, the unique vision that engendered these urban projects is being locally overwritten. The terms of each metamorphosis (adaptation) respond to new regional social, economic, and political conditions. Furthermore, the diversity in stakeholders, roles, and participation levels craft a wide range of processes. In the next two sections, four of the most common spatial adaptation strategies will be compared and contrasted in pairs. A case study is selected to present each adaptive spatial strategy.

4. Addition vs. Subtraction

Addition and subtraction are the two basic, yet opposite, operations in mathematical science. In spatial terms, they imply either the increase or decrease of matter in an object. Both strategies are being deployed with similar frequency to what can be considered a unique urban artifact ubiquitously built. This suggests that the spatial operation of adding or subtracting matter is not inner to the architectures. No pattern of lacks or spares can be established. The drivers to these opposite spatial strategies of adaptation are found outside the tectonics and into the contextual specificities of each district. In short, it is the context that determines the operation, not architecture. Moreover, specific geographies do establish patterns. For example, adaptation through addition is frequently found in European districts that were enfolded in the city centers over time. Such is the case for the cities of Bordeaux (Fig 2), Copenhagen, Amsterdam, or Leidschendam. Whereas operations of subtraction are much more likely to be found in post-socialist and post-industrial geographies such as Thuringia, the former West-Berlin, Wolfsfurg, etc. Nevertheless, there are exceptions to the norm such as the subtraction deployed by Alexandre Chemetoff in Allones, France.



Fig. 2

The most well-known case of adaptation of Modernist residential districts is through addition (Fig. 2). Lacaton Vassal with Frédéric Druot and Christophe Hutin designed the adaptive metamorphosis to three blocks of the grand ensemble Cité du Grand Parc. Situated at the north edge of Bordeaux's city center – ten minutes by tram–, this grand ensemble comprises over 4000 housing units and 60 hectares. The district was planned by Jean Royer and Claude Leloup to house civil servants, Algerian returnees, and relocated residents from the Mériadeck district[20]. Over time, the large families that populated the district disappeared and were replaced by a decreasing aged population[21] that lives today in decayed and energetically inefficient blocks. After the Renovation Urbaine[22] program of the national agency of urban renovation A.N.R.U. (Agence National de Renovation Urbaine), the now-famous three blocks were scheduled for demolition. In 2010, Aquitaine –the Office Public de L'Habitat de Bordeaux Métropole and the main social landlord in Le Grand Parc– envisioned an adaptation through the renegotiation of the urban qualification of the district with the city's local authority followed by a design competition. The negotiation succeeded, and the UNESCO site boundary of historic Burdeaux was extended to the grand ensemble of Grand Parc[23]. This urban requalification granted the district protection from demolition and preceded its design competition. The winning architects added a winter garden and a balcony to all existing apartments. These unheated, unprogrammed, semi-external, and prefabricated spaces (3,80m deep) disrupted the fixed layout of social dwellings by increasing freedom of movement, light, and views. Moreover, the addition improved the buildings' thermal performance while fully transforming the appearance of the blocks. These additions were placed in less than three weeks per housing unit, minimizing the disruption of the inhabitants and reducing the cost-effectiveness of the overall scheme[24].



Fig. 3

The adaptation of the post-socialist new town of Leinefelde in Germany deploys the spatial strategy of subtraction as a tool to embrace the town's rapid deindustrialization. The process of becoming less. A speeded rise preceded the fast fall of Leinefelde. After the Second World War, Leinefelde became part of the German Democratic Republic (GDR) and bordered West Germany. To consolidate its strategic location, the socialist elites planned the industrial development of the town. Under the strictest socialist ideals, Leinefelde became a center of the textile industry by establishing one of Europe's largest cotton mills[25]. From 1964 until Germany's reunification, three factories were built, and the population multiplied almost ten times. The construction of prefabricated housing followed this pace. However, the collapse of the GDR in 1991, closed the factories, shutting down the town's central source of employment. From that moment until 2010, the population decreased more than two-thirds and the vacancy of buildings became a dramatic problem.

Through a design competition, Stefan Forster Architekten began subtracting half of the housing units in seven blocks. The process lasted from 1998 until 2004. The seventh, and last block in which he operated (Fig 3), transformed the 180 meters long block into eight distinct villas through partial demolitions and the addition of balconies. A long participatory process with the tenants allowed them to address each living situation and crafted spatial transformations that adjusted to the tenants' needs.

The selective subtraction of half of the block by Forster Architekten ended its dwelling vacancies. At the same time, it changed the urban scenario and the identity of the place. The ubiquitous and monofunctional block, often stigmatized, was broken into eight collective villas that fostered re-individualization, re-appropriation, and re-identification at every scale. From the public space to the villas and every housing unit. Forster's subtractions in Leinefelde deployed an "anti and post" socialist industrialism metamorphosis to re-establish the balance between housing stock and population, needs

and comfort, and heritages and new ideologies. It was through the fast subtraction process that the town of Leinefelde not only overcame shrinkage, de-densification, deceleration, and loss of profitability but also gained a future. In 2004, Leinefelde initiated another restructuring phase with the amalgamation of the neighboring town of Worbis. Also, a year ago, 2019, the now called town of Leinefelde-Worbis organized yet another design competition to launch a new restructuring. This time the goal is to reconnect with the surrounding landscape.

Confronted under this binary comparative scheme, addition and subtraction reinforce the outstanding level of perfectibility that these housing structures contain due to their degree of standardization. This allows a wide range of spatial re-arrangements and reduces the time and effort needed in the process. Moreover, the binary confrontation of cases unearths that the drivers motivating the adaptation are to be found in the social and economic context. However, looking into detail, it is the political climate and managing stakeholders that hold the key to line up adaptation processes, even when demolitions have already been scheduled.

5. (Re)programming vs. Camouflaging

Recent adaptations of Modernist residential districts have deployed diverse spatial strategies of (re)programming and camouflaging. When confronting them, the first thing that stands out is the difference between working planes. (Re)programming transformations comprise the ground floor, whereas camouflaging repurposes the skin – the facades– of the housing blocks. Furthermore, at first sight, they offer opposed capacities. The once criticized bare ground today embodies the full potential for renegotiation. On the other hand, Modernist mass-housing facades have become an urgent and global challenge regarding energy inefficiency.



Fig. 4

The Modernist residential landscape is being reprogrammed. Modernist ground floor stands out as potential towards the future. No other architectural movement systemically deployed such generous use of the ground level in city-making. It's openness and practically incompleteness stand today as an arena for social, political, and economic renegotiation. An example of these renegotiations is the adaptation by Rozana Montiel in the Mexican Unidad Habitacional of San Pablo Xalpa in Mexico City. Through participatory planning, the vertical dividing structures –fences and barriers created by the ground inhabitants over time to enlarge their private area– were substituted for sheltering horizontal ones. Roof-modules equipped for diverse programs: blackboards, climbing walls, handrails, and nets remodeled the open space convincing residents to remove 90% of the barriers. Therefore, the ground space was reconquered and repurposed for its original public use. The landscape adaptation in San Pablo Xalpa portrays a design process of adaptation that re-establishes the original Modernist ownership: "one that habituates inhabitants to the common good[26].



Fig. 5

The strategy of camouflaging is commonly found in nature. Animals such as chameleons hide their presence to avoid predators and therefore survive. However, what does it mean for a Modernist residential district to ensure its community's continuity through camouflage?

The skin of a building is frequently approached in design as either, or a combination of, aesthetics and energy efficiency –light and insulation– In the case of Modernist residential districts, their unprecedented mass construction under extremely dogmatic design patterns has converted the Modernist residential block facade into a recognizable ubiquitous artifact of our cities. As such, it has absorbed connotations. In light of adaptation, it is no longer possible to remain in the realms of energy or aesthetics without addressing inherited political contexts. The increasing amount of camouflaging techniques within adaptations evidences the politicization of the Modernist residential façade and the need for its reconceptualization.

Dearborn Homes (Fig 5) was the first Chicago Housing Authority (CHA) public housing project built after World War II. Today it stands out as the only survivor of CHA housing projects in the city's State Street Corridor. Five minutes by foot from the Illinois Institute of Technology by Mies van der Rohe, the district welcomed its first tenants –working-class African Americans– in 1950. Three years later, households with a salary over $65 a week –$10 below the salary midpoint of Chicago families– were labeled as "excess income" and evicted against their wishes[27]. By 1984, only ten percent of households in Dearborn Homes reported employment and seventy-three percent solely relied on welfare subsidies. The policy of evicting households that earned minimum wages generated a deep concentration of poverty in public housing projects around the country. Moreover, it translated into financial crises of the managing institutions which led to the withdrawal of their maintenance services. From 1980 the project was known as a high-crime area, a place to run away from.

Camouflaging took place in 2010 through the addition of stone quoins –masonry blocks at the corner of a wall– triangular ball-topped gables, and metal extended entrances to every block. The strategic camouflage re-identified the plain-brick public housing project as a neo-Georgian work disguising a North American colonial architecture. Furthermore, it was completed with closed-circuit cameras and security guards to monitor at all times life in the district.

The spatial strategy of camouflaging impersonates the identity and culture of a place. In doing so, the Modernist mass-housing facade, as its landscape, becomes an arena for social, political, and economic renegotiation. Therefore, although very different at first glance, both (re)programming and camouflaging adaptive strategies hold the capacity to adjust historical discontents and cultural perceptions in the often stigmatized Modernist residential district.

6. Conclusions

Despite the critical declaration of the “death of Modernism,” the Modernist residential district continues to be alive, housing communities worldwide. The extensive accumulation of adaptations and demolitions suggests that these architectures are experiencing a transitioning phase into contemporary ideologies and collectivity. Notwithstanding the unique vision that engendered these architectures, adaptations do not respond to a singular process. Instead, regional social, economic, and political conditions craft the terms for each metamorphosis. Addition, subtraction, (re)programming, or camouflaging –together with other other strategies such as augmentation, and diversification– have proven that (1) the life cycle of these housing structures is not completed, (2) these Modernist architectures have a great degree of perfectibility due to their standardization and (3) adaptation requires a high degree of collaboration between local authorities, developers, housing authorities, architects, planners, and inhabitants. Overall, the sustainable value of re-using the Modernist structures in terms of carbon and energy is clear and highly significant given the present environmental crisis and the vast amount of Modernist residential districts worldwide. In addition, the social value of adaptation is key towards an equitable city. Only through adaptation, will the existing inhabitants of Modernist residential districts –who are typically low-income and elderly– and their social networks –through which they have acquired economic resilience and social identity– continue. This continuity has the potential of preserving affordable housing and avoiding more displacement within our cities. In the past, the social implications of the Modernist residential district were overlooked by the design community through a simplistic and deterministic narrative of failure. Today, understanding the social outcomes of housing adaptation is vital. The most substantial working-class housing resources worldwide are at stake.

Notes

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Image Captions

Fig. 1. Left. Demolition of Pruitt-Igoe in St. Louis, Missouri. Right. Cité du Grand Parc, Bordeaux, before and after adaptation by Lacaton&Vassal, Druot, and Hutin.
Fig. 2. Left. Process of adaptation in housing block of Cité du Grand Parc, Bordeaux by Lacaton Vassal, Druot, and Hutin. Right. Finalized adaptation. Photo of the winter garden in one unit.
Fig. 3. Left. Process of adaptation in Leinefelde (Block 7), by Stefan Forster Architekten Right. Finalized adaptation. Exterior view of the villas (former Block 7).
Fig. 4. Left. Before adaptation Unidad Habitacional San Pablo Xalpa in Mexico City. Public space view. Right. After adaptation, transformed public space by Rozana Montiel.
Fig. 5. Left. Dearborn Homes Chicago, before adaptation. Right. Dearborn Homes in Chicago, after adaptation.

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Biography

Adriana Pablos is an architect with a wide range of action between design, teaching and research. She studied in the Polytechnic School of Architecture of Madrid (ETSAM) and the Fachhochschule Nordwestschweiz - FHNW in Basel. She works on architectural solutions and urban approaches to improve the perfectibility and domesticity of the cities. Currently she is researching the adaptation of Modernist residential districts at Harvard University. Adriana's awards for academic research include the "Intervention in Heritage" award by the Official Chamber of Architects of Madrid (COAM), the Prado Museum "City: Foundation and Memory" grant, 2017 Emerging Award by the pan-European Future Architecture Platform, La Caixa Foundation Full-Ride Fellowship, Harvard's Joint Center for Housing Studies grant, and GSD Annual Research and Development Award. She has taught in Spain, Ukraine, and the United States.

The "Urban Border System".

Support infrastructure as a borderland articulator between Nicaragua and Costa Rica.

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Abstract

We live in a time of increasing globalization and extreme accessibility to information networks, products, and people. That is why transport infrastructure as a territorial layer of connectivity and the location of specialized logistic nodes of production plays a critical role in geography. This has led to research on the behavior and operation of these global logistic networks, which finds the application of operational security dynamics in the management of "networks" or "systems", precisely at the territorial borders, where they are reconstituted and governed differently.

There is a complex system of planetary-scale networks, boosted by air, sea, and land transport connectivity, supported by "hard infrastructures" that work as geographical systems, intersecting with the logistic nodes of production. One of these global nodes is in Central America, where the Panama Canal, despite its expansion and due to the high demand of the global market, is becoming insufficient. World trade seeks new transportation routes in Central America, and the border strip between Nicaragua and Costa Rica has a great strategic interest.

The border between Costa Rica and Nicaragua is 310km long. Both countries have individual interests in developing big-scale infrastructure projects focused on freight transportation, such as interoceanic canals that include important urban interventions, ports, logistics clusters, industrial parks, and airports. Therefore, I wonder: Can these infrastructures, as territorial support systems, serve as an operating system of the border territory, addressing and blurring the geopolitical border?

This borderland has represented a geopolitical problem at the local scale, although, it manifests itself as a great opportunity for the operational impact generated by the infrastructures that transcend the urban scale into a territorial-geographical scale, facing the dual and global paradigm of the geopolitical border.

Keywords: Borderland, Infrastructure, Logistics, Geopolitical, Networks.

1. Global network logistics and supply chains. Extreme connectivity by the hyperglobalization.
The world economic system is configured by a complex network of actors that are located in global strategic points, constituted under the operational logic of "*network systems*"[1], formed by commercial and industrial nodes and flows. These are part of contemporary business geopolitical strategies, which locate their financial and corporate centers in the so-called "global cities"[2], such as New York, London, Singapore or Hong Kong, from where they take control of the chain of value and supply of its services or products, managing the productivity of its production centers, located in other countries that are part of the system, but which normally guarantee a more economical production workforce without affecting the quality of the product or the delivery schedule, these are countries and regions like India, Bangladesh, Africans or the Central American and Caribbean. Thus constituting a large freight transport logistics network that is part of the global supply chain. The improvement of world trade dynamics driven by "hyperglobalization" has led to a process of extreme communication and global connectivity, promoting the political de-virtualization or geographic blurring of territorial borderlines, through cross-border treaties, regional cooperation projects, and commercial and economic integration systems, which are international strategies to facilitate the flow of the value and supply chain, reconciled through specific agreements that are aimed at reducing debts, reducing taxes, preferential sales or better prices of products to participating countries.

This impulse is possible thanks to the planification and materialization of infrastructure projects which manage these links, with the creation of the appropriate infrastructures to make it possible, such as bridges, airports, ports, railways, roads, oil pipelines, cabling, and others, these "hard infrastructures" articulate the urban centers with specific commercial logistics centers, such as specialized urban areas, foreign-trade zone (FTZ), industrial estates or production parks, conforming what is known as "Special Economic Zones"[3] (SEZ). Which are conceived as defined and specific geographic regions that have special laws and a particular political administration, oriented to a free market economy as opposed to the typical laws of a country or nation. Therefore, the laws of a nation can be suspended, or not apply, within a "Special Economic Zones"[4]. These "SEZ" operate as "Network Systems"[5], most of them as "Clusters"[6] which are those business groups that share resources, components, suppliers and raw materials for the production of their service, thus optimizing the supply chain and the delivery process of the product, where the transportation infrastructure is the vital territorial support to guarantee the flow, the development, and its process success. The connectivity between their devices is constituted by the physical and spatial links, which have managed to break with the geopolitical paradigm of borders.

These commercial and urban nodes that operate as network components understand the network itself as a unit and not the node that functions as a device within it. Flows are the stream of information, trade, or supply that flow between the nodes, which circulate through channels that interlace the nodes themselves. In this way, trade flows behave like information and communication channels, in which different actors operate in time and space[7]. The supply and value chains operate from this logic, they are complex and global production systems of a specific item, which, each of its parts or components are made from manufacturing plants located in separated production nodes, many of them located geographically in other latitudes, that, thanks to the free flow of trade, this product can be materialized in record time in a final assembly plant. The final price of the product is fixed and negotiated in the corporate houses or headquarters, located in the "global cities"[8], directly with each of the destinations where it will be placed, to confirm its distribution and set it at a competitive price. The optimization of the supply chain or commercial transport, such as the reduction of delivery times, to guarantee a successful product delivery, is not only possible thanks to free trade agreements and commercial cross border cooperation agreements, but also by the growth of the infrastructure of the transportation network, which guarantees direct connections from all participating nodes that make up this supply value network. On the other hand, many countries are not part of this global trade network due to economic and political conditions; however, being aware of the commercial potential that is generated from guaranteeing job opportunities and economic growth in their countries, they have promoted legal interventions and investments to improve and adapt infrastructures in these countries, to articulate and open their territorial borders to this system, without radically intervening their political structures and economic systems, appropriating the format of the "SEZ" that allow it. A logical world that confirms the control of the capitalist model and that is driven by "hyperglobalization"[9].

Dani Rodrik, Harvard Professor of International Political Economy, defined "hyperglobalization" as full global economic integration. A global situation that would produce powerful consequences for the Nation-States that fail to adapt, as it would represent not only a drastic change in their political, economic and social dynamics and structures but also in the way geopolitics will operate. Rodrick mentions some consequences of "hyperglobalization", such as that restrictions cannot be imposed on territorial borders; the harmonization or compatibility of some monetary, legal, and regulatory systems,

with the idea of reducing the transaction costs that come from different jurisdictions; and a reliable commitment among the pacting nations not to deviate from these harmonization systems[10]. This can be interpreted as an imposition of the capitalist system of "world order"[11] to all those States that wish to enter this system, but it has even worked in countries like China and India, which are appropriating these methods to promote their economies globally. It is understood that it is a model that has not represented an integral solution to social inequality in countries that cannot adapt to the system, but it is a system that can be adapted and applied in border systems based on the appropriation of its functional logics, constituting itself as a process of the spatial intervention of the borders, understood as special areas of economic and social encounter, thus configuring its own "Urban Border System", readapting and adjusting the territorial and legal mechanisms of the "SEZ", to a border condition that has the potential to create a commercial transportation network system made up of a nodal and logistics corridor, as is this case study in Central America.

Apart from this social dilemma, the world economy faces a type of "impossible trilemma"[12], mainly because it is not possible for a hyperglobalization process like the one described above to coexist at the same time with an impulse to the sovereignty of national respect, as is currently the case in some latitudes, in addition to the application and defense of a "mass policy", where institutional decisions transparently reflect the preferences of the electorate democratically. This "impossible trilemma" is related to the redistributive impacts of the global economic opening, requiring the measurement and observation of the territory from other political, economic, and territorial scales. This new economic theory dictates that reducing barriers (international borders) generally has a positive effect on the economy as a whole, having a redistributive impact. Understanding that the lower the existing barriers, the greater the redistributive effect derived from their elimination compared to the aggregate gain, and the impact of redistribution can be offset by maximizing social welfare.

According to a 2018 United Nations report on international trade and development, about 50% of global goods trade is represented by intermediate goods. These intermediate goods are differentiated by the stage of processing and assembly depending on their production chain and the destination where they are produced. Here the concept of the global value chain was born, which is understood as the set of activities necessary for the production of a good or services where each activity carried out takes place in different geographic locations[13]. Each link in the value chain corresponds to the different tasks that a company develops to finally obtain and place its merchandise. The supply chain seeks to optimize the production and delivery times of the product, it also generates an efficient combination and integration of the participating organizations or companies from the strategic level to the tactical and operational level, and guarantees companies the availability of the product where and when necessary, with an adequate price and added value for the customer. These factors can only be improved if global connectivity is optimized. The "SEZ" intend to contain these logistics and relocate in strategic global points of port reception and global distribution as the global point that is represented by Central America, an aspect that makes the application of logistics and production networks feasible, as part of the treatments to address the breakdown of borders.

In the book "The Deadly Life of Logistics", Deborah Cowen investigates the science of logistics of the second and third stages of globalization, understanding how the "ancient military art" of logistics was a reference for the creation of the current global economic order, not only in production but also in the invention of the supply chain and reorganization of national economies in transnational systems. Focusing specifically on the "bottlenecks" such as national borders. Cowen mentions that while the world of production and distribution is restructuring, logistics also actively reconfigure the global maps of security and citizenship, a phenomenon argued from the security of the supply chain, with its challenge to the notions of state sovereignty and border management. It leads us to understand logistics as a global phenomenon with all its moving parts interconnected through the same objects that move, the capital that animates them, the coercive devices such as the phantoms of power that operate within, political discourses, laws that force them and the bodies that impel or obstruct it[14]. Confirmed the operation of the system from the logistics of the "Network System"[15], characterized by its capacity for flexibility, adaptability, and survival, which has given rise to these security models of "networks" or "systems " and that are achieved through the transportation infrastructures and connectivity systems, in which borders are reconstituted and governed differently. Even these security models prioritize the flow, organizing themselves through new ways of containment, such as new types of borders or security zones, a territorial entity that can be conceptualized as the aforementioned economic and social meeting areas, and which are the basis for the creation of the "Urban Border System", overcoming the border through connectivity through infrastructures. In this way, supply chains do not have to be exclusively geared towards efficient circulation and capital accumulation but can provide a networked terrain and comprehensive support for a common benefit.

2. The geopolitics of connectivity. Central America as a logistical interest global point by the infrastructural systems.

The most influential force in the world is no longer the military power, but connectivity, thanks to its power to generate multiscale geographic spatial links. Connectivity incorporates all those infrastructural systems, such as airports, ports, highways, bridges, canals, gas pipelines, oil pipelines, and electrical networks that are configured to transfer information, people, or raw material from one point to another, from physical or virtual systems. This works as a great global support system, which has been promoted in the last thirty years with hyperglobalization, radically transforming relations between countries through international links, where they share resources, raw materials, and information. In this way, connectivity has modified the logical nature of how all societies relate or interact with each other, creating a system that operates and works as a globalized circulatory system, which supplies, reconfigures, irrigates, and oxygenates the planet in every corner. Constituting a new map of the world system.

The connectivity systems of a country are identified and located mainly in the cities, where the population is agglomerated, corresponding to the urbanized areas, where the highest economic value is developed due to the concentration of economic activity. This new global connectivity map is alive in real-time, being configured through the spatial relationships generated by infrastructures, new lines of technology, supply chains, and the global transport of people, goods, and services. This builds a new global system map that transcends distances, time, and territorial scales, under the concept of: “the new functional geography”[16]. This new map represents the human 21st-century civilization and considers all the transport systems of the world which provide energy to cities, incorporating virtual communication systems such as global internet networks. In this way, in many countries of the world borders are now invisible political barriers, which exist more on political maps than in real life itself, disappearing more and more.

The common political map of borders that we currently know does not represent the real behavior of human beings or their daily relationships. Therefore, through "functional geography", the researcher Parag Khanna has proposed the concept of "connectography", integrating geography as a platform or field of action and connectivity as an operating system that irrigates the territory connected to urban points. Based on the new map of “connectography”, it is possible to understand how cities depend on the relationships caused by the links between them, specifically caused by infrastructural systems. In this way, cities no longer measure their power by their size or population, but by the impact of the influence that their connectivity exerts[17]. As in Singapore, a country of 697.1 km² and a population of 6,500,000 inhabitants, basically, a city-country that takes advantage of its strategic geolocation surrounded by powerful cities, which, although due to its size, is not visually clearly appreciated on the Asian map, its influence and power of relationships make it the most powerful city in all Asia.

Cities seek to be as connected as possible with other cities, so that business and the economy can be regularized, guaranteeing a commercial influence in its geographical immediacy. Through this, the supply chain can be regulated, causing the proper functioning of the production system. Thus, today's world is reorganizing itself thanks to connectivity based on supply chains, much more than based on borders themselves. In the global geopolitics strategies, Latin America has not received enough attention, but this has changed, the main reason for this change is the strong investment in connectivity networks. Thanks to this, Latin America can efficiently export powerful amounts of raw materials, minerals, and agricultural products, such as wood, oil, gas, and food such as soybeans or meats. This has made that its main buyer be China, a global power with more than 1.5 billion people to satisfy and supply. According to data from the World Bank and the International Monetary Fund, Latin America exported 24% more raw materials in 2019 compared to 2018, causing a greater impact on the economies of Brazil, Colombia, and Chile (fig 1), and is generating a growing trade with Central America.

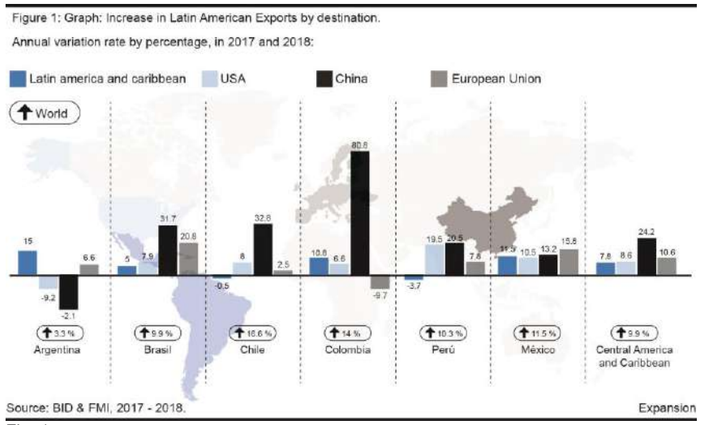


Fig. 1.

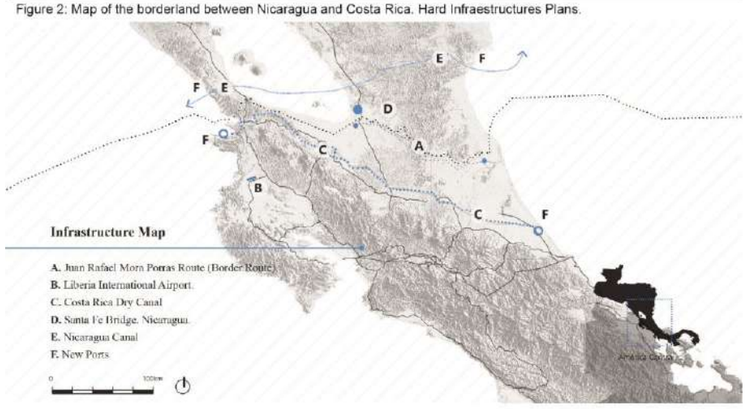
Latin America does not stop planning and building more territorial connectors, proposing more "hard infrastructures", through what is known as “topographic engineering”[18], understood as the technological capacity to build strong and hard infrastructure on land surfaces that contain complex natural and geographic systems, such as across the oceans or under them, through mountains or above them, to create physical cross-border links, however, we had neither the technology to do so nor the political nor social maturity to imagine it. This has opened the creation of new territorials links from new urban political figures, international relations treaties such as cooperation pacts or regional alliances that allow visualizing urban systems and infrastructural articulators that serve as territorial devices to optimize urban activities that can occur through borders, considering all the biological, social, economic and political links, like active information layers on the territorial system.

Central America has a great advantage due to its geolocation, which consolidates it as a node of great international interest in the intervention of connection infrastructures. The Isthmus not only represents the narrowest cordon of the American continent, functioning as an ecological-natural territorial bridge and for commercial transport between North America and South America, but it also contains the Panama Canal, an infrastructure that allows shortening the transport routes between the world´s biggest oceans. Since its recent expansion, completed in 2014, the Panamá Canal already has limitations for the passage of ships with a greater load capacity that is on the market, such as the so-called Triple E, which transport 18,000 containers per unit[19]. These mega-ships, due to their size, cannot pass through the new canal locks, this has led to project new ways and visualize new alternatives transport routes by the transnational companies and the shipping companies. Which Manuel Castells refers to as “multidirectional flows”, proposing possible routes that can be adapt to the new demands of the networks, in this case, of the market[20] without ignoring the previous ones, looking for better options links and new landing points, such as new ports, corridors or routes, projecting strategic points that allow to streamline port processes. That is why in a world that operates from the supply and value chains of multinational companies, diversifying cargo transportation options in Central America is very attractive and highly feasible for large companies and world powers, to guarantee and diversify a better service and command of the handling of goods.

The borderland system between Nicaragua and Costa Rica has a potential territorial, political, and social platform that represents a great opportunity to be addressed from its territorial systems and functional networks through the connectivity layer. Its border line runs 310km: 160 km correspond to a political path that crosses rural-urban territories, forests, and farms, and the remaining 150 km correspond to the natural border of the south bank of the San Juan River, presenting a dual condition of infrastructural treatment in this border. It contains different natural, social, economic, and urban systems, which currently distort the border by crossing it daily. Although it has two official border crossings, it behaves as an open system of social cohesion and an uncontrolled economic encounter in many sectors. These dynamics, through the spatial intervention of the infrastructures and the correct articulation of their systems, can optimize the current dynamics and their relationships, from the linking or integration of the "hard infrastructure" investment projects is planning to build by both countries. Considering a clear opportunity for cross-border cooperation through infrastructures and urban operations from the connectivity and systems that compose it.

Both nations plan the development of "hard infrastructures" for transoceanic connectivity, through commercial corridors (Canals), which consider the development of new urban, logistics, and commercial systems in their approach. Two megaprojects totally unrelated to each other. Nicaragua plans to carry out an interoceanic canal in the south of the country, a megaproject with greater capacity and size than the New Panama Canal, this project is currently on hold. For its part, Costa Rica is planning a Dry Canal in the northern sector. Both projects are independent proposals that do not consider each other, with a distance of 50km between them and would duplicate support infrastructures such as airports, ports, industrial estates, and technology zones, affecting not only the logistics of commercial exchange and the industrial dynamics of the region, but would also generate a greater impact to the ecological systems of high natural wealth in this region. This is why the impulse to create an integration of interests arises so that both projects work in a systematic way, linked to each other, to avoid an over demand for services, double investment, and a greater impact on protected natural systems. Therefore, there is a need to apply a collaborative network system project over the entire border strip, constituting an “Urban Border System” based on the infrastructures such urban connectors and architectonic devices, and also, from the political and regulatory platforms with which the "SEZ" and global supply chains operate (fig.2).

Figure 2: Map of the borderland between Nicaragua and Costa Rica. Hard Infraestructures Plans.



Source: Author's Image. 2019

Fig. 2.

This border represents a geostrategic point of great historical interest, today it is reconsidered as an intervention point for the creation of a new transoceanic commercial and economic crossing system from the intervention of its infrastructural systems, based on the logic of complementing and supporting operatic logic of the current Panama Canal, without competing with it. Incorporating new service and transport techniques, applying new technologies in the handling of goods through the territory, connecting potential seaports in both ocean coasts. This new connectivity system aims to provoke the physical and virtual links necessary so that, from the urban logistics articulated by the infrastructure, the necessary territorial support is generated for the generation of controlled industrial, economic, agricultural, urban, and technological activities that develop Central America as a geostrategic sector. To provoke a sense of ownership and belonging of its inhabitants, through the integrative and territorial management of the infrastructure.

It is complex to modify already established social structures and spatial perceptions, but this can be modified from an adequate application and intervention of the infrastructures, guaranteeing the articulation and connection of nodes at their corresponding scale and demand. Edward Soja in his publication “Postmetropolis”, expresses that it is convenient to pay close attention to the lack of conceptual and material limits of the modern post-metropolis since it has been this breakdown of the old borders that has caused new ways of looking at and interpreting space urban. The dual dialectic between globalization-localization, the restructuring of industrial production that accompanies it, the centralized political authority of the State, and the patterns of territorial identity, have produced an extraordinary expansion in the scale and in the scope of the modern metropolis[21]. This represents a unique border intervention platform, an opportunity that is projected from the application of connectivity systems at a multiscale level, allowing the deciphering of operating systems and their capabilities to intervene appropriately.

Today connectivity is a development tool, which goes beyond the border lines that the human being himself has drawn and that many nations have inherited. It is about using infrastructure as a geopolitical tool to gain influence. The current infrastructure map is the map of world connectivity, and it is not only a map that has achieved peace in many conflictive borders thanks to the cooperation of commercial interests, but it is also a map of geopolitical influence in which it is constantly being invested. Today connectivity is a trend, it continues to advance constantly, seeking a better articulation of urban centers and guaranteeing supplies to cities, seeking to find new routes to optimize the operation of the global transport network.

3. The "Urban Border System" as a complex territorial network system and connectivity systems.

The “Urban Border System” is a network system based on the articulation of the territory through infrastructures, which serve as operational territorial support, reactivating the multiple systems that interact on the border through different scales of action. Its relational and connective capacity as urban and territorial support is vital for this study, as well as the understanding and intervention of the borderland. The contemporary territory manifests itself with the laws of the infrastructural, which are the laws of connectivity over the territory and geography, considering the idea of the territory as a continuous system[22], ordered by the laws of the infrastructure that manage it, intervening from the concept of "archipelagos" as specialized fields of territorial organization, which are conceived from the composition of dispersed, discrete and accounting units, with a specific identity or function, and that must be complemented and intertwined by connector devices so that they acquire its functional sense of territorial nexus. This is the logical principle that how supply chains work, but on a different scale and from another field of action. In which each of the elements that intervene maintains their identity, and together they form part of the total identity of the system, characteristic of the capacity of networked systems[23].

Foucault affirms that the main variables that define the contemporary territory are communication and speed, both are achieved through connectivity, ordering specifically from the “archipelagos” connectivity, understood as fields or systems of action, in which the infrastructure serves as a tool to intervene as an articulator for the optimal functioning of the systems. This contemporary spatial paradigm shift is redirecting the understanding of conceiving the territory and geography from the "network polycentric" model, which is no longer based on the traditional urban form but is configured from networks that order, activate, and provide the action field. In this way, the field is conceived as an organizational platform of the geographical or maritime territory, just as the "Megalopolises" operate today[24], from the logic of related and linked "urban archipelagos”, thus constituting a network system of a higher order polycentric, flexible, and multiscale. An “Urban Border System” as a networked system works under these same logistics, it manages to intertwine points or nodes of interest in multiple directions of the border, constituting an infrastructural seam that repairs the political rupture marked by the border line, behaving like a “city in network” but in a complex border scenario, encompassing the continental and the maritime.

The “Megalopolises” are identified thanks to the progressive growth of cities due to the increase in population[25], in the case of the border, it is said that growth would be developed by the growth of industrial and economic activity driven by infrastructure projects, projected as a controlled growth sensitive to natural conditions, also feeding on the existing urban network. Megacities work from the infrastructural connection of a corridor, where the economy and capital produce a growth boost. In this case, a new integral interoceanic canal between Nicaragua and Costa Rica serves as the main border articulating corridor. This corridor would incorporate multiple territorial and maritime logistics, projecting systems of supporting ports and industrial maritime platforms connecting the Caribbean Sea and the Pacific Ocean, a "Border Urban System" that would operate as a networked logistics corridor transcending from the continental to the maritime territory.

Ludwig Hilberseimer develops the concept of "Network City" in 1929, exposing advanced urbanism in energy terms, defining a city as a node of action within a continuous system. Affirming that large cities, especially cosmopolitan ones, are the energy centers of states and the world, describing the city as part of a more global system and that it is linked to the people who developed it through the economy[26]. This statement not only supports what Parag Khanna stated in the definition of "Megalopolis", but also describes the logic of the behavior of urban and economic development on the territory. The "Network City" is the conceptual germ of the "World City"[27] and of the "Global City"[28], which start from understanding mobility and technology as the project base of a functional new city, with the capacity to operate at various scales, affecting the world's political and economic systems.

There are two main trends and effects of the "hyperglobalization" of the XXI century, connectivity as the main trend and urbanization, complemented and linked between them as part of the network systems, both are tools that, adapted, serve for the intervention of complex border systems such as the case between Nicaragua and Costa Rica. In the global map of the “connectography” (Khanna, 2016), it is possible to identify the urban mega concentrations by the agglomeration of the luminous points that can be seen from night photography of the earth, these points, and luminous networks correspond to the cities and their communication channels. We can visualize the large urban centers that are intertwined with them and measure the expansion and growth that occurs over time. This makes it possible to find the nodes that are disconnected and the layers that can be intervened to optimize the systems through specific interventions, constituting true operational megacities. The "connectography" map shows us the degree to which these countries are conducting what in economics is called "Gross Fixed Capital Formation"[29] (GFCF). The operational force of connectivity from transport infrastructures and connection devices is powerful, today it is a tool to apply it in many latitudes, articulating States and erasing their historical border lines.

The border between Nicaragua and Costa Rica project’s a great intervention platform as a network infrastructural system for all the conditions that it meets, such as territorial, commercial, social, ecological, economic, and political, so that this border can be analyzed under the lenses of functionality, to approach and constitute a new form to integrate two nations that for years have had absurd political conflicts, spending millions of dollars in international lawsuits, judicial processes, and infrastructure that competes with ambitious projects that they cannot take on economically or logistically. If both countries were to project their scale of impact, they would understand the integral factor and cohesive value of their aspirations, materializing in a joint project under an unprecedented praxis where a border disappears, becoming a unique meeting place, an "Urban Border System" of exchange and shared logistics for the good of the entire community and region.

Notes

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Image Captions

Fig. 1. Graph: Increase in Latin American exports by destination (2017-2018).
Fig. 2. Map of the borderland between Nicaragua and Costa Rica. Author´s image. 2019

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The dematerialization of form in contemporary hybrid Architecture.

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Abstract

Inside a Hegelian dialectic, the study contrasts the concept of form in a classical view (thesis) versus the contemporary dematerialization of form (antithesis) to understand how the arts apply this concept currently.

The dematerialization of form means iniatilly its own hybridization, which results in elimination of the recognized historical elements that are part of architecture. It means accepting and blurring its boundaries by interweaving other artistic fields into the form. In this research, the concept of form will be analyzed assuming its non-delimitation as purely architectural, being accepted other disciplines as visual arts, sculpture, installation, among others, as conceptual generator of form. The formal dematerialization was analyzed in four architectural works from a historical outline. The analysis allowed dialectically evaluating the result of the elimination of historically defined archetypes as belonging to the architecture field.

It is concluded that this lack and mix of boundaries of the artistic fields results in the possibility of Architecture losing its identity and, perhaps, even its usefulness and noble tradition for being confused or mixed with other practices that are close to it.

Key words: dematerialization, form, hybridization, architecture, dialectic.

1. Introduction

"As more the eyes and ears become capable of thinking, closer they come to the limits where they become immaterial" Friedrich Nietzsche (1878).

The form annihilated the art. Much of the classical and Greek history, which we know today, comes from an art that long time ago disappeared. It is the painting in vases, which declined abruptly in the beginning of the 5th century BC. Amphora, Hydria and Kantharos were some of the typical vases that, produced in different sizes, were associated with a form and a function (transport of liquids). Around 600 BC, Athens dominated the Mediterranean by exporting vases and art by local artists. At that time, several techniques were already developed, such as the production of water-resistant pigments and the use of fire to seal the vessels. Even with the limitation of paintings in two dimensions, the figures were represented with features, action, poses, gestures and emotions. Around 320 BC the art of painting on vases would become a dead art.

The Greek history reported clearly shows a hybrid between sculpture and painting. Furthermore, it shows how a simple need (carrying liquids) went beyond its mere function to contain information in it. Thus, form and function worked together to develop a painting technique. However, the form was one of the characteristics that determined the death of this art, after all, the painting, already evolved, could no longer be represented in the curved vases, and the flat built walls had become more suitable surfaces. The form did not eliminate the function since the vases continued to be used, but the form annihilated the art of painting in vases.

The exemplified Hellenic culture relates form and art in a relationship of dependence, which, from a historical and continuous context, still exists in contemporary society. Thus, dematerializing form means extinguishing the ideal archetype vision that moderns sought, even unsuccessfully, and which no longer represents the so-called contemporary society (vague expression with only market value, Domeq, 2011, p. 180). The undefined form seeks to incorporate the observer and user when inserting it in its interpretation, relativizing their understanding by not determining its meaning as can be seen at the beginning of the last century in several works by Picasso such as *Les Demoiselles dÁvignon*, 1907 (Fig. 1), from the painting field. Although the form varies in its technique depending on the art (painting, sculpture, architecture), in the word ontology the concept is the same. Thus, in recent times, the society have seen new narratives that dialogue to be accepted, which means that the breaking of the ideal form represents in the arts a possibility of new languages.

At the beginning of the 20th century, inside the context of modern thought the abstraction sought to control the notion of form, which means, its materialization. Contrary to modern purism, postmodernism added greater freedom to form by allowing a range of possibilities as the context, history and personal interpretation, reinforcing a formalist process. However, Pop Art evolving from Duchamp's conceptual art argued that the artistic objet can accept the everyday facts and banal which results in a non-formal definition of the object, like paintings by Ives Klein and Basquiat. Foster (2014, p. 122) argues that the postmodern strategy of indefinite genres started from the principle that categories such as art, architecture and media, are given as independent, but today, however, this separation seems more a matter of modernist faith than an ontological fact.

The dematerialized form, without references, without a social contract is a constant in the liquid modernity which we live in (Bauman, 2001, p. 9), resulting, contemporaneously, in the simulacrum and in the virtual (Arantes, 1993, p. 50). As Wisnik (2018, p. 5) states, one of the most striking features of contemporary architecture is cloudiness (volumes of undefined contours, ethereal spaces, enigmatic objects without clear hierarchies). This insertion of hybridisms results in the dematerialization of the architectural form, which, according to Virilio (1979), is the result of the action of speed and accelerated time that we are experiencing. This mix of artistic fields has the ability to push the limits of architecture to deform a pure typology (Holl, 1980). We then have a hybrid field, a multifaceted, diverse and complex object, which generates new meanings, which today need to be understood.

2. Historical line of dematerialized art and hybrid form

Regardless of the contemporary process used in architecture, it is clear the formal dematerialization of the object and the non-definition of recognizable limits. This research seeks to understand the result for the field of architecture when we identify its dematerialization. The research understands, and accepts, that art in general reflects the society and its state of experience. As Matuck (2010) states, it reveals the cultural landscape of its time. Thus, when we understand that the concepts that constitute the body of art no longer have material limits we conclude that society lives in an era in which the general deregulation of its sociais contracts (laws, behaviors, collectivity and sovereignty) becomes the rule. Wisnick (2018, p. 69) states that in the age of media and electronics, architecture itself seeks a certain dematerialization, liberating itself contradictorily from the effects of gravity, the resistance of materials and the physical efforts that buildings are subjected in “liquefied” constructions, which abandon the anthropomorphic reference and the Vitruvian principle of *Firmitas* (solidity), and the

results of it is a contemporary positioned dialectically to important coverages of the classical tectonic tradition.

In hybrid terms, the research defends the concept of hybrid as inherent in the architectural field. Greek architecture associated hybrid fields, as in the Caryatids (Fig. 1), a mix of sculpture and architecture. In modern art, the existence of several other artistic fields together with architecture can also be identified. Painting, sculpture, music and theater have always been present, with an application that is often clear and recognizable as in classical architecture, and not explicit and diffuse as in baroque. In this sense, it differs conceptually from Latour (1994) who defends the hybrid as an asymmetry of the modern, that is, in a pure vision of art as propagated by the modernists themselves. The modernist form sought the total work of art by inserting other artistic fields in architecture, however, each field had its own, somewhat independent, applicability. In a modernist thought, all hybrids were conceived as a mixture of pure forms and the new meaning originated was the elevation of architecture as a major art (Latour 1994, p. 76).

Thus, architecture, as a discipline incapable of complete autonomy, in contemporary culture remains hybrid but the fields today are cloudy, interconnected, mixed visually and conceptually. The hybrid is present when accepting different artistic fields influencing and even dictating the form, which, with its blurred limits, creates greater complexity in its reading and tends to dematerialize its limits. It becomes essential to understand what the result of all this breaking of limits currently represents to architectural production, accepting it as a hybrid field.

Since the enlightenment principle of reason, honesty and purity, the analysis of the form evolution reveals the elimination of archetypes and models resulting in an aesthetic disintegration of the artistic object by assimilating other contemporary principles such as the continuous dissolution of dual pairs that defined the experience of modernity in the name of more fluid characterizations (Wisnick, 2018, p. 61). Thus, from the idea of an archetypal object, defined and precisely read, we result in dematerialized structures in contemporary art, with no apparent limits and aesthetic definitions. The form is always read in a relative state and becomes polysemic and hybrid. In order to understand dematerialization, it is necessary to understand the materiality more deeply. Materialism, in philosophy, defends the view that all facts, including those about human thought and history, are causally dependent on to physical processes or even reducible to it. Material architecture is directly linked to the constructive, spatial and sensory elements that draw up the form. Walls, floor, ceiling, pillars, windows, doors, compose and define the form, resulting in a definition from archetypal elements. Virilio (1993, p. 93) further argues that materiality is achieved when the practical functions of a particular element (door, window, density, extension, proportion, etc.) are represented in their nature. Thus, a door has an intrinsic nature of generating access and its symbolism is linked to this function.

The materiality of form requires the presence of the body as essential. The texture, the senses and the interpreted image, unveil a kind of form phenomenology in which the observer is part of the work. According to Heidegger (1927) what gives to everything their constancy and essence is the matter in things with all the source of their particular way of sensory pressure (color, resonance, hardness, massiveness). Dematerialization, otherwise, aims at the zero degree of form. Paradoxically, this empty form carries within an infinite amount of readings since the notion of limit no longer exists or is practically null. The hybrid object, by denying the pure and free materiality of mediatized and figurative cultures, can become immaterial, dematerialized.

The historical process of "breaking" the form is tightly perceptible in the impressionists who diluted the form in order to emphasize the contents and meanings. This form liberation can be seen in the painting *In the Wheatfield at Gennevilliers*, 1875, by Berthe Morisot (Fig. 1). According to Argan (1988, p. 82), impressionist painting is considered as a field of forces in interaction that create and organize the image. Greenberg (1960) even claims that a painter like Cézanne sacrificed veracity, or accuracy, in order to adjust the drawing and composition more explicitly to the rectangular shape of the painting screen. This “experiences” represent the beginning of, conceptually, a form dilution with a greater emphasis on the process than on the artistic result.



Fig. 1

Zonno (2014, p. 59) states that much of contemporary architecture, inclined to formalism, has taken up the values of constructive, futuristic and expressionist avant-garde, choosing the sublime, which transcends the human, as an aesthetic category. The biggest transformation was the break with a vision of totality and unity of language. It is precisely the diversity that constitutes the contemporary character. Whit not a single language orientation or aesthetic parameter that can define it, dematerializing the totality of the form. By accepting this diversity and expansion of the artistic field the society entered in a hybrid field, a mixture of nature and culture (Latour, 1994), which represents the opposite of the “total artwork” (*Gesamtkunstwerk*) defended by Wagner (beginning of the cultural industry).

This same contemporaneity argues that both the units and the whole of the object lose their archetype, just as the shape and orientation also lose their ability to generate a definite reading. Monteiro (2006, p. 20) states that the hybrid is always an object in between (between times, typologies and processes). An object that results from very different collisions: morphological, functional, technological and cultural. The result will then be a hybrid in several ways: multiple, transitory, and ambiguous. This means that the formal structure, (units and everything), and the set of formal features (shape, color, size, texture, orientation, position and visual inertia) of an object also need to work in the “medium” to become a hybrid.

This definition of the form as an object has historically several aspects of analysis. Tafuri (1992) points out that any analysis attempting to record the structural relationship between the specific forms of architectural language and the world of production, of which they are part, must do so in violation of the objects of the analysis itself. The creation of architecture it only occurs when we eliminate any ideology and then create meaning. In contrast, for Venturi (1966), too much attention to form invariably results in a loss of meaning, emphasizing ordinary buildings, but with a high degree of visual communication, and the “decorated” architecture of the Las Vegas landscape as an example capable of creating a layer enriched with visual symbolism.

German definition of form is based in a subdivision into two concepts. The first is the “Gestalt”, which defines how objects are understood by the senses. The second is the form itself, which implies a certain level of abstraction. Aureli (2011) defends the discussion of the form from its applicability as the “formal being” which is always involved in several dualities. Action and situation or subjects and data, are poles in which the notion "to be formal" materializes. In this way the “formal being” is a political act because it always expresses one side of society. Also, is against the totality and the generic conceptions of multiplicity, which necessarily results in an object in constant tension between its interior and exterior.

This notion of form with political significance is contrary to the *commodity* form, typical of postmodern thought, and was a stage to arrive at the *advertising* form, characteristic of advanced capitalism (Arantes (1993). This are part of a simulated architecture typical of the dematerialized world that, by treating only the surface, becomes the primary source of the simulacrum experience. For Virilio (1993, p. 79), the simulation is part of an absolute transitivity that ends up decomposing the architecture. Undefined limits are part of the concept of expanded field (Krauus, 1979) or mixed of artistic fields. Thus, without objective limits, the architectural form loses its spatial dimensions floating in a temporality without references, where any form is capable of materializing.

3. Work analysis

“Today architecture has to assume the changing condition of reality”. (Juan Herreros, 2006).

From the beginning of the 20th century, the modernist rationality was centered on positivist thinking and in the cult of the machine. This stance defended a close attention to technical formalism, based on the rigor of modulation and structural launching as a space definer. Its insertion in society was strengthened by the industry that, in the post-war period, allows the arts in general to gain space in homes, offices, through the design of furniture and others apparatus. In architecture, the positivist rhetoric can be seen in drawings always represented isolated from the city. Presented with a white background ideal and independent of the entire existing urban situation since the existing city was seen in a negative way. This modernist evolution was characterized by progressively opening up the internal space with glass panels. As larger these became, more apparent the structure emerge, reaching the point where it was external to the built volume. The glass still had a conceptually essential feature because it is a material that makes it difficult to reveal the trace of time. The modernist skin represented in the use of pure glass merges the external and internal limits that still maintain the purity of the form but which results in a prelusive elimination of the concept of archetype and the beginning of a form simulacrum.

In some artistic fields such as sculpture, the formal hybridization becomes very clear with the work Lobster Telephone (Fig. 2), by Salvador Dali, 1936. This object has a final form that loses its ability to read although the parts are recognizable. Even tending to a single form several manifestations are generated by the parts that are only distinguished by their own characteristics (recognizable phone and lobster image) and no longer allow specializing in only one of them without being minimally compromising the other. Thus, there is no longer a single object but a hybrid of interlaced objects.

The modernism, when choosing architecture as a major art, determines more hybridity than purity. The possibility of accepting other artistic fields confirme that much more the moderns think of themselves purists more mixed they become (Latour, 1994, p. 47). Virilio (1993, p. 09, 10) states the paradoxical phenomenon in which the opacity of construction materials is reduced to nothing, smearing the notion of form limit. Pampulha Church (1943), designed by Oscar Niemeyer, reveals the relationship between architecture, painting, sculpture in a dependency relationship (Fig. 2). Architecture becomes the background for the painting, which takes place on tiles, a Portuguese tradition, on the panel portraying São Francisco, painted by Candido Portinari. By accepting tradition within the formal game, modernist purity loses strength even though its basic principles seem to be represented. In this case, it is not possible to analyze the architectural work disassociated from the painting, as well as the opposite. In this way, slowly happens an intermediation of the artistic fields, which for being visible indicate a non-existent fragmentation. The shape of the church with its curved roof seeks to mimic the Brazilian landscape itself. Thus, constructive rationality exists to release the form. The thin concrete roof has a variable thickness, meeting the needs of structural response. However, the resulting formal cohesion responds to the whole and not just to constructive rationality.

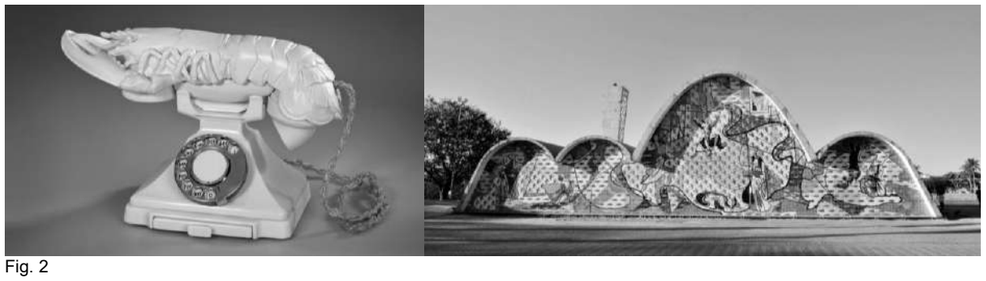


Fig. 2

In the 70s continuous experiments and breakdown of the object takes place in a range of artistic fields. Gianni Pettena, Italian artist, took this concept to the extreme with his Ice House I, which is a hybrid between land art and architecture (Fig. 3). The artist covered an abandoned school with ice during the winter in the city of Minnesota, USA. The architectural form was dematerialized with a natural element (ice) what represents a nature work. However, when covered with ice, the material transformed the form once it disappeared into the context. The limits of materiality of the object can also be questioned since a pure emphasis on the material also makes it dematerialized. In this temporary hybrid between sculpture, architecture, and performance since the construction material tends to disappear, the materiality is concentrated directly in a single construction element (ice), which, with the passing of the seasons, does not maintain it original form. The architecture acts more as support for a form in constant change. By mimicking the landscape, the object loses strength, but having the region's architecture as a base, the typology is maintained. This new object thus becomes a ghost of

constructions that already existed and creates a strong criticism of the relationship between man and nature, ephemeral and perennial, form and not form.



Fig. 3

Concepts such as instability and ephemerality do not seem to apply to architecture within a classical thought from which contemporaneity seeks to release. Ito (2005) defends some concepts of this thought, among them an architecture of the wind, without form, fast, that floats in the air, with little matter, without significant weight. An architecture as an ephemeral and unstable manifestation, which seeks stability and permanence, but which is unstable, fictitious and transitory, blurred and with diffuse, oscillating and sinuous boundaries, which accepts the limit as a membrane and osmotic slim skin that does not separates the inside from the outside but that allows you to cross.
At the Tippet Rise Arts Center (Fig. 4), in Montana, USA, the form seeks their genesis in the land itself and is defined through a new design process, a new methodology. The architect, in the design phase, defines the process of building construction rather than the final form. The result obtained was defined together with the removal of the land that previously contained. They retain memory and impression and introduce new meanings and tensions. They are structures of the landscape because they were born from it and give it order, transforming the matter into habitable space and developing a new constellation of possibilities of use between the plateaus, canyons and hills that make up the site. The object as an idealized representation is eliminated and the strength of the form results from the created process. Materiality is elevated to the extreme when receiving the texture of the place. However, the methodology has mimicry as a guiding element, which ends up dematerializing the form and consequently architecture itself. This becomes, according to Duchamp's perfect method, pure concept.



Fig. 04

The Kanagawa Institute of Technology building (KAT), 2004 to 2008 (Fig. 5), seeks to redefine the form by redefining the limits of traditionally recognizable elements. Thus, a forest of pillars, a set of small columns of varying proportions, acts both as a building structure and as a boundary for blurred spaces. None of the 305 columns are identical in section and angle. Subtle differences in the shape of these supports are defined by their structural purpose and the role of the spaces they create. Groups of structures ambiguously divide the area to create varied spaces. The columns are arranged within

the architecture as trees placed in a landscape in order to create a space mimicked like a forest. Everything becomes “skin”, whether it is a floor, external walls or a roof, since the lighting happens both from the outer perimeter and the very thin roof. Plant pots, flexible elements, help to define spaces. Thus, the shape of the space is always in constant change, it becomes undefined, ambiguous. According to Ishigami (2018), the formal of a project is not its uniform and coherent characteristic defined a priori by the architect's mind. On the contrary, it is up to the architect to define the inside and outside (limits) in a free environment, which will be the support for the expression of the multiple form. The limits raised to the extreme eliminate the form and the question than becomes to reveal new functions of architecture.The KAT building is then defined through an unlimited field.



Fig. 05

Discussing the dematerialization of architecture necessarily leads to the concept of limits, which contemporaneously become unrecognizable. Based on a sensitivity developed over centuries around the emergence of a stable image (of form), today we favor the sensitivity of unstable images. The discussion about form is irrelevant since it is always the result of an architectural strategy and never the starting point (Tschumi 1996, p. 218). Art is being represented as a concept-form that is defined as an abstract configuration that can be used in a specific place or case. Both the form can generate the concept and the concept generates the form. Since the concept is somewhat abstract, it can be reused and applied in different situations, thus generating a catalog of architectural ideas. Than, the hybrid, in its essence, is an object that has the possibility to generate an interaction between the fields of architecture [as equipment, infrastructure], sculpture [as an object and experience], performance [in its ephemerality], music [with its noises] and theater [as a representation]. An object that dissolves in the environment and stimulates the user's sensory perception. A reaction to contemporary media architecture in spectacular ways, since the spectacle favors visual and tactile sense, and in this thought architecture is repositioned as a tool for social and political revelation.
However, the conventions that underlie collective memory are the same that guarantee a relationship with society. This respect for the fundamentals characterizes an architecture posture totally opposed to the avant-garde myths of novelty, rupture and experimentation (Montaner 2017, p. 103). The form carries all the complexity of a society that is also complex. It contextualizes records the time, mistakes and successes of this society itself. This hybrid collectivity with an unlimited form is best represented in an artistic field as the performance which sought to leave the institutions (theater, music, cinema, dance, etc.) and so it became political once it works with non-symbolic and non-representation. It is an art that still needs materiality, but not the meaning of materiality since it is based on the ephemeral. Thus, the immaterial form, dematerialized, seeks to represent experiences by accepting the context and the relationships that may come to exist around the work.
Modernism had a clear form with a clear and well-defined goal of transforming society through architecture. However, historically the architectural object loses strength in a continuous process of disintegration, dissolution and contextualization. The formal complexity of contemporaneity is nothing more than the reflection of the continuous shift from the objective defined by society. Economically interesting to a neoliberal culture, the objective of architecture is always being changed, displaced, and it formal result is not usually clear. It no longer has any typology or archetypes. The space that the form adds is no longer visually and often not even physically delimited. The form became a process, without a previously defined result. Friedman (2012) defended the dissolution of architecture, but what we see is the dissolution of fundamental and inherent concepts in the architectural field. Aurelli (2011) argues that, today, it is necessary to reestablish the limits of form, against ubiquity and its complex organization. This attitude towards framing and limitation needs to be developed both as a literal material form of architecture and as a political principle.

4. Conclusion

The euphoric proliferation in the use of media surfaces and digital ornaments in order to make Architecture increasingly an immaterial experience, can lead it to a zero degree of form (Fiori Arantes (2012, p. 114). Referenced in an increasingly fast time the form finds no other way but experimentalism, since the power of creation is already overcome, but its re-signification is unimpeded. The form can no longer be cataloged once it is defeatured, either with nature or just with concepts, fields in which infinite forms are possible. Thus, when we say that an element of the field, in the architectural case, ceases to exist, we conclude that the field dematerializes. It becomes a hybrid. Canclini (2015, p. 68) states, when debating about the identity of a people that, although hybrid processes exist, cultures have immeasurable nuclei or structures, not reducible to intercultural configurations without threatening the continuity of the groups that identify themselves with them.

The conclusion is that when we eliminate the limits that determine each artistic field it is possible to lose the identity of the respective field. In the case of Architecture, the result is the loss of its identity and usefulness when it is confused or mixed with other practices that are close to it. However, as the form is a cultural production, the need for a natural hybridization is clear, without questioning the limits of each artistic field of adaptation but, capable to still allows its evolution. Thus, the understanding of the arts as a social critic implies a political view and demonstrates an essential function for art as quoted by Natalini (Adolfo, SuperStudio, 1971): “if Architecture is only a codification of the bourgeois models of property and society, then we should reject architecture”.

By dematerializing the form, we are renouncing the political issue of art. When there is no criticism, the result becomes just experience and in the case of the form, it becomes pure formalism devoid of important values to society. Within a liberal view, in which we live, the materiality of form becomes a commodity that reflects the current thinking of breaking and extinguishing the value of architecture as art. Aiming only at an aesthetic experience, devoid of other values, becoming essential to the profitability cycle. Within this cycle, the form becomes a bourgeois and mass product, to be appreciated in a Kantian way, with creation, use, obsolescence and death, a process, moreover, mediated by the society of the spectacle.

The form evaluated as commodity reflects a concept inside a Platonic and simplistic way of eliminating its materiality. The Aristotelian view distinguishes matter (primary element) from form (arrangement). These concepts exist in all objects inseparably. This is a paradox because the capitalism needs liquidity from an Architecture that is solid matter (Cairns and Jacobs 2014, p. 113).

A non-materialized architectural and artistic form reflects a society without social limits, without past, and future, duration and extension. A society that values the instant time that changes in the speed of its consumption, which is increasingly virtual. If art, and the form used, reflects “our” time, the difficulty of this reflection becomes intesifying since contemporaneity is increasingly faster, liquid, and less allusive to society itself.

Historically, as the form progressively develops more it dematerializes and consequently becomes specific once its language needs a specialist, to be understood. Thus, at the same time that the form without limits accepts various readings from the user, it also moves away this user, due to its complexity. According to Ray and Canales (2015, p. 221) there is an endless dialectical relationship between architectural form, as a stable system, and citizenship, as an autonomous group of individuals who have the capacity for plural and contradictory forms of life. Thus, when a form devoid of references and limits breaks this dialectic, architecture becomes only a commercial product once the dialogue within society is extinguished.

A conclusion is that the process of hybridizing the fields between architecture and other arts is part of a natural process, but one that is necessarily political and thus capable of criticizing. Simple experimentalism and experience cannot be a solid enough basis for sustaining an artistic field since it stimulates only the superficial and the representation, concepts that even critical theater seeks to eliminate. After all, as in the words of Arantes (2011, p. 75) “in the commodity society, there are a range of stages, scenarios and, above all, the staging of the consumer mass as a theater audience on a global scale. Something like a ritual control ceremony through the inoculation of colossal doses of aura and charisma in the ordinary life of anesthetized crowds”. So, in this society, being the architecture, as a built space, a necessity, the question that arises is how does a society without restrictions live with an architecture filled with an “empty form” clearly without limits?

Image Captions

Fig. 1. Left. Pablo Picasso, Les Demoiselles d'Avignon, 1907. Center. Cariatids. Right. Berthe Morisot, Grain Field, 1875.
Fig. 2. Left. Salvador Dali, Lobster Telephone, 1936. Right. Oscar Niemeyer, Pampulha Church, 1943.
Fig. 3. Gianni Pettena, Ice House I, 1971.
Fig. 4. Arts Center Tippet Rise, 2016.
Fig. 5. Junya Ishigami, Kanagawa Institute of Technology, 2008.

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Biography

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A Filter to the Frame
From the *fenêtre en longueur* to the *finestra arredata*

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Abstract

The notion of home has always been intrinsically related to the idea of shelter, a place to find security, providing comfort, privacy, and intimacy. However, different types of boundaries limiting the interior have through time challenged established understandings of domesticity. In the dawn of modernism, by claiming the house a “machine” to be lived in, Le Corbusier proposed on his five points the *horizontal window*. Relieved of its load-bearing responsibility, instead of ventilation and light its main feature was to provide the framing for a view, just like a camera lens; moreover, as Beatriz Colomina stated, it was a device to “[domesticate] the ‘overpowering’ landscape,” responsible for making “the house a house,” rather than providing “a domestic space.”

On the other hand, for Italian architect Gio Ponti, Le Corbusier´s famous aphorism was long being misinterpreted, given “the house [was not] literally a machine as a machine [was not] literally a house.” Moreover, for Ponti, domesticity was an indispensable feature of modern living. In 1954, Ponti published on Domus magazine the *furnished window* – a response for the “void left” on the modernist *glass wall*. His reinterpretation consisted of a filter – or in Ponti´s words, a “human diaphragm.” By adding a “layer” with shelves, paintings, and fixtures, the all glazed surface turned into a piece of equipment – a “*transparent furnished wall,*” where architecture, interior, and furniture design overlapped. By ultimately displaying possible shades and opacities, the inner and outer scenery changed, depending on the natural day or artificial night lights.

Therefore, thru readings of two exemplary projects – Le Corbusier and Pierre Jeanneret´s *Immeuble Clarté* in Geneve (1930) and Gio Ponti´s *Via Dezza* apartment building (Studio Ponti, Fornaroli, Rosselini, 1957) in Milan, this article intends to confront how different but complementary window concepts helped to (re)define the modern interior, thus establishing new notions of domesticity.

Keywords: modernism, domesticity, Gio Ponti, Le Corbusier, filter.

1. Introduction

In the private world of the home, the *facade* is the building envelope, a boundary space, or the threshold that can either connect or separate us from the external public realm, depending on its level of permeability. Traditionally opaque, these surfaces customarily enable the notion of *domesticity*, - a term originated from the Latin word *domus*, which means home, and is related to private life, comfort, and intimacy. On the other hand, *window,* by definition, is an “opening in the wall, to let light and air to go through, from which you can see the other side; *fenestra, ventana*”; in popular terms, it can also mean "the eyes"[1]. In the early years of modernism, new construction methods and materials have begun to transform not only the way we build but also the way we inhabit; therefore, as Alexa Winton explains, in that period, the “increasing use of large expanses of glass in domestic architecture blurred the conventional distinctions between inside and outside, potentially exposing much of what had been private life to the outside world at large”[2]. Much debated by philosophers from Walter Benjamin to Jean Baudrillard, the facilitation, and mishaps of glass employment by the early modernists leads us to its utmost version, the *glass wall*. Provoking new interpretations and solutions for the domestic space, the employment of the glass wall and its variations was a matter of interest of many modernist masters such as Le Corbusier and Gio Ponti, and especially while planning new ways of “modern living.” Therefore, thru readings of two exemplary projects – namely Le Corbusier and Pierre Jeanneret´s *Immeuble Clarté* in Geneve (1930) and Gio Ponti´s *Via Dezza* apartment building (Studio Ponti, Fornaroli, Rosselini, 1957) in Milan, this article intends to confront how two different but complementary housing concepts for the modernist window sought to (re)define the modern interior, thus establishing new notions of domesticity.

2. Le Corbusier – from the *fenêtre en longueur* to the *pan de verre*

At the dawn of modernism in 1923, Le Corbusier (1887-1965) first launched the motto - a *house is a machine for living in,* and in 1930, in the first volume of his *Oeuvre Complète*, it was time for his “Five Points for a New Architecture”[3], including the *fenêtre en longuer* – the horizontal window - a large horizontal ribbon void in the plane of the free facade. According to Alexander Tzonis[4], Le Corbusier´s five points formed the theoretical basis for his home designs until the mid-1930s. Moreover, as Beatriz Colomina stated, the window for Le Corbusier was taken as an urban problem, in which the city should be conceived as “a collection of postcards”, or better, “a collage of images”[5]. Therefore, as she continues her interpretation, for Le Corbusier the window should function as a device made primarily to look out, to capture and frame the landscape, “a gigantic screen”, where “to inhabit [meant] to inhabit the camera”[6]. Directly linked to the independent facades and the free plan, Le Corbusier´s new concept for the horizontal window together with the other two points - the roof garden and the *pilotis*, functioned as the result of a new construction system enunciated within the diagram of the *Dom-ino* houses of 1914. As Kenneth Frampton explained, the *Domin-no* system envisioned the “plastic unity between interior and exterior space;” a prototypical structural scheme formed by columns, slabs, and stairs, without beams or closing walls, establishing “a spatial matrix,” demonstrating not only the independence of the structure with the building enclosures but also the possibility of industrial production in architecture[7]. Constructively, the independent structure gave the facade an equally independent status, although coordinated with the whole of the architectural artifact. As for the windows, the system enhanced the possibility of enlargement up to the point of turning the facade into a full transparent wall - the *pan de verre*; in Tim Benton´s interpretation, for Le Corbusier “the primary function of the window was to let light in”; moreover, in his purists´ conceptions, “the logical extension” for the “separation of structure from enclosure” was the creation of entirely glassed walls[8].

The theme of the windows and its layers would occupy an important place in Le Corbusier´s complete oeuvre - from the horizontal *fenêtre en longeur* of the 1920s villages to the post-war layers of the *brise-soleils*. Between two extremes laid the *pan de verre* – the glass wall - employed in his collective housing buildings of the 1930s - the *Immeuble Clarté*, 1930, the *Cité Du Refuge*, 1929, the *Swiss Pavilion*, 1930 and the *Porte Molitor Building*, 1931. As Frampton argued, “the modular, glass and steel *pan de verre* facade employed in each case was intended to demonstrate the ‘machine-age’ aesthetic,” representing a break with the 1920s villas[9]. These four works evoked the *Redents - the object-type* of the *Ville Radieuse* - the radiant city, which intended to offer the “essential joys of sunlight and green”[10]. According to Nemec-Piguet, these buildings “served as laboratories” for Le Corbusier´s urban experiments[11]. In this context, the *pan de verre* appeared as a mechanism for defining the spatial limits associated with the independent structure, which surpassed the *fenêtre en longuer* even “in the version of the five points included in the number ten of *L’Architecture d’Aujourd’hui* of 1933”[12].

In the *Cité de Refuge* project in Paris (1929-33), as well as in the *Centrosoyuz* in Moscow (1930-36) - the solution for the *pan de verre* envisioned a response to the building habitability and thermal comfort – namely, the *neutralizing walls*. Following the concept of the *respiration exacte*, it presupposed the use of two layers of glass panels separated by an air layer for heating and ventilation. According to Frampton, this conception´s effectiveness depended on the existence of central air conditioning[13]. However, as Tim Benton explained, Le Corbusier´s "failure to have the system built in the Centrosoyuz and the Salvation Army hostel likely made him wary of promoting [this system]"[14]. Benton continues by reinforcing that Le Corbusier, instead of giving up using the *pan de verre*, searched for a natural way to solve the problem, which would lead him to the development of the concrete *brise-soleils* placed in front of the *pan de verre*[15]. But a solution seldom disclosed in Le Corbusier´s writings was his interpretation of the *pan the verre* as the *quatrièmme mur - the fourth wall*, where the camera metaphor is reassured through the concept of applied *screen diaphragms - écran diaphragme*.[16] This idea was depicted first in a sketch on the *respiration exacte* chapter of *La Ville Radieuse* of 1935, and briefly explained in an essay of the same year published by *Tchéco-Verre* magazine entitled - *Glass, the Fundamental Material of Modern Architecture* on which Le Corbusier wrote:[17]

> This new wall of light, constituting the fourth wall of the room, can be used architecturally with all the necessary grace and imagination, becoming a "useful wall" (*mur employable*), that is to say, a wall that can include built-in furniture and bring about this miracle of the Modern Age: the four walls of the room can be utilized.

According to Rodriguez Casas, in 1946 the *quatriéme mur* concept was revisited in Le Corbusier´s conference *Problèmes de l'ensoleillement*; in which he declared - *Il faut diaphragmer le pan de verre* – "It is necessary to diaphragm the glass wall". Even if that time the solution was reduced to the employment of *a loggia brise-soleil* – a retracted facade with a balcony working mainly to protect the facade from insulation, he proceeded with the diaphragm metaphor by demonstrating the possibility of controlling the exposure with different types of facade openings[18]. According to Casas, in 1959, Jules Alazard published the promotional essay - *De la fenêtre au pan de verre dans l´architecture de Le Corbusier*, presenting a summary of the evolution of Le Corbusier´s thermal and functional facades propositions - *la fenêtre en longeur, le pan de verre, le quatriéme mur, le brise-soleil* and lastly, the "separation of functions" – which was also related to the diaphragm metaphor[19]. Even though the concept of the *quatriéme mur* stands out as a paragon with Gio Ponti´s *finestra arredata,* its employment as a whole facade solution is not widely demonstrated in Le Corbusier´s *ouvre* as with Ponti´s intentions for the *finestra arredata* – the "furnished window". Nevertheless, the *Immeuble Clarte* stands out as a good object of comparison; as Le Corbusier´s first residential building employing the *pan de verre* as an overall solution, by suggesting the diaphragm metaphor in the employment of the balconies as a response to climate and domesticity, it relates to the Gio Ponti´s via Dezza apartment building, besides anticipating Corbusier´s *brise-soleil* solution to be later materialized at the *Unites D´Habitation*.

2.1. The *Immeuble Clarté*

As explained by Arthur Rüegg, Le Corbusier and Pièrre Jeanneret realized in the Immeuble Clarté two technical aspirations: that of a standard modular components´ construction and the employment of the *pan de verre*, constituting "a new concept of housing".[20] The name of the building reveals its essence: Clarté, in French, means clarity; and therefore, everything in this work is thought in terms of light. Restored between 2007 and 2011, the building occupies a whole block in a 15m wide by 50m long plot and has double access at numbers 2 and 4 of Rue Saint-Laurent, district in *Villereuse*, in Geneve, Switzerland[21]. According to Courtiau, "it is the only testimony to the extensive development planned for the neighborhood of Terrassière", where Le Corbusier and Pièrre Jeanneret first thought of building a set of houses[22]. Originally intended to be occupied by professionals and public servants, the adopted parti is a variation of the *Immeuble-villa* of 1922 - an unbuilt project "genesis of the Corbusian collective housing"[23]. Lodging forty-five units on nine floors, it is organized in its majority as duplex apartments constituted as "detached houses in many ways"[24]. Of Le Corbusier´s five points employed, besides the free plan, the free facade, and the garden terrace, an elaborated version of the *pan de verre* was developed, - as a variation of the *fenetre en longeur*; the *pilotis*, otherwise, are occupied with the residential access, and the garages, the common services, and installations[25].

The block condition of the Clarté building implied the existence of four facades facing the streets: two smaller ones, oriented to the east and west, which are predominantly closed; and two larger ones, facing north and south, twenty-five meters long, and entirely glazed. The option for a glass facade attached to the independent structure of the building had the advantage of bringing transparency and lightness, but it also required control of light and heat and the employment of its structure to support the glass, - a modular grid steel structure manufactured, calculated and built by its owner and builder E. Wanner.[26] Supporting the double-glazed facade sliding windows, glass doors, and all elements in reinforced glass, the structure also presents an added layer of balconies, responsible for both prolonging the internal space, as for protecting the facade from sunlight through movable awnings[27]. The standardized window frames correspond to rectangular planes arranged between the metal columns in modules of 2.80 m, divided into two sets vertically, and horizontally into three sections corresponding to an opaque lower sill, a middle transparent section on the eye level, and an upper opaque sill. On the balcony floors, these correspond respectively to the fixed glass sill coinciding with the metal sill of the balcony, the sliding windows with bearings - an innovation for the time, and the fixed upper glass lintels coinciding with the awnings. The alternation of opaque and translucent sections in the overall ensemble, recalls both the *pan de verre* and the *fenetre en longeur*, so dear to Le Corbusier. Moreover, by employing the combination of the *pan de verre* with the layer of balconies, Le Corbusier initiates a transformation, a sort of "transition to [a] new approach in relation to the *pan de verre* and its sun protection"[28]. In such a way, the glass facade ceases to be just a surface, turning into a functional and technological three-dimensional layer, connecting the external surface and content.

Another important breakthrough of the Immeuble Clarté´s *pan de verre*, is that it changed the traditional typological notion of characterizing buildings according to the program. For Curtis, the use of the *pan de verre* - inspired by the Van Nelle Factory in Rotterdam - in collective housing, "removes the negative connotations of the word proletarian, unifies the characterization of different programs and defines the aesthetic of the machine era"[29]. But, besides being a technical element, as Flora Samuel explained, in Le Corbusier´s work, the window is directly connected to the idea of framing a view:[30]

> The idea of framing is absolutely central to Le Corbusier's design philosophy. Le Corbusier thought continually in terms of frames – frames to house people, frames to house views, frames to house his special collection, frames to store utilitarian things, frames to extend into the environment drawing the influence of nature within.

As appointed earlier, Beatriz Colomina also suggested that notion in Le Corbusier´s works by interpreting the window "as a camera lens", able to enact a series of "overlapping frames" directing the gaze outward and away.[31] Therefore, she continued, by transforming the house into a "system for taking pictures", the perspective of the humanist eye is replaced by the "camera angle"; and it is precisely this engagement with the media that would legitimize modern architecture, moreover, it is by "this domestication of the view [what] makes the house a house, rather than the provision of a domestic space, a place in the traditional sense".[32] Primarily referred to the *fenêtre en longeur* epitomized by Villa Savoye, Colomina´s interpretation can also be applied to the specific sectioned condition of the Clarté´s *pan de verre*, while promoting the horizontal gaze. Moreover, in Clarté´s case, the use of the *pan de verre* as a transparent wrapper also works inwards; if at first, this condition might compromise even more the traditional notion of domesticity by exposing its content, to establish that, a closer examination at the Clarté´s interiors and the extent of control designed by Le Corbusier is made necessary.

In the private units´ inner organization, it is primarily the structure that ordinates the different spaces - moving from the facade plan to the interior of the building the *pan de verre´s* vertical divisions share the same alignments and modulation of the pillars´ structure, therefore drawing an imaginary grid that defines different environments, either acting as loose elements in the living room, accentuating the kinetic, fluid and centrifugal character of the space, or in the closed compartments disappearing embedded in the partition walls. The other control device employed at the Clartè is the color palettes. Mostly employed to reinforce Le Corbusier´s architectural intents on the common areas and exteriors, as Nemet-Piquet explained, in the Clartè "colors play an integral part of the architectural coherence".[33] Therefore, if outside the materiality is emphasized within the natural hue colors of wood, concrete, and railway-green, on the inner common areas a similar palette of dark browns, beiges, greys, light blues, and greens is displayed.[34] On the other hand, in the apartment interiors Le Corbusier was able for the first

time to employ at a large scale the sample palette of his purist schemes for the *clavier de coleurs* developed by him for the wallpaper factory Salubra[35]. In fact, "bound by contract", the tenants were obliged to choose colors combination within the palette provided added to the mandatory requirement to employ uniformed curtains determined by Wanner[36]. But, as Ruegg explained, even if "the Salubra collection enabled Le Corbusier to retain control of the overall impact", it also allowed a variety of color combinations, given to a certain extent the possibility to display personal preferences.[37] As for the interior furniture, besides the given in construction cupboards, kitchen, and bathrooms, "surprisingly the architects gave up implementing their own 'equipment de l´habitation'"; even so, the model apartment design furnished by the Wohnbedarf company, displayed a collection of modern furniture and aesthetics, as an optional reference for the tenants.[38]

Therefore, at the Clarté, the transparent glass panels located on the periphery of the rooms attract attention promoting the promenade towards the balconies, and, although the standard rigid modulation and design constraints may give the impression of a uniformly illuminated and cold atmosphere of the inner environments, that whatsoever is not enough to suppress the search for a variety of the contrasting backgrounds of the occupied interiors. Moreover, the combination of the two types of glass, added to the dynamic organization of inner spaces end up dismantling the purely figurative perception of the sequenced layers of interiors, the balconies, and the street, granting complexity to transparency; which, as transposing Rowe´s interpretation on the architectural employment of glass, it stops being "literal" and becomes, "phenomenal".[39] And that is most observed especially at night when Le Corbusier´s "polychromic symphony"[40] is lit, and the "human filter" controlled by the dwellers is revealed, demonstrating, -through the *pan de verre*, the many possibilities of framing the domestic landscape.

3. Gio Ponti´s *Gesamtkunstwerk*

The work of Italian architect Gio Ponti (1891-1979) encompasses the many scales of architecture; appointed as a "forerunner of Italian design," Ponti was a promoter of ideas; acting not only as a professor, he was also a key figure on the *Milano Triennale´*s exhibits*,* and both founder and director of Domus and Stile magazines[41]. Anyhow, although Ponti left a great amount of written and graphical work, he never fully committed to pre-established lines of thought; declaredly not interested in developing theories, Ponti defended a more pragmatic and less schematic perspective of reality[42]. Undervalued for quite some time in modern architectural historiography, it was only in the 1980s that his oeuvre started re-gaining attention; and, more recently, celebrated on two major retrospective exhibits[43]. In those, Ponti´s "global format of experience" is demonstrated by his works as an architect, designer, graphic editor, and artist[44]. Moreover, a strong relationship between furniture and architecture is revealed, and especially those in the domestic realm. Therefore, in order to better understand Ponti´s ideas for the modern dwelling and by profiting from yet underexplored primary sources, this section will use as guidelines Ponti´s original writings at the Domus Archives and the material found at the Gio Ponti Archives.

3.1. *La Casa All´Italiana*

Ponti admired Le Corbusier; but although having published many times Le Corbusier´s works and thoughts at Domus, he nevertheless believed that the modernist master famous aphorism was long being misinterpreted, given for Ponti "the house [was not] literally a machine as a machine [was not] literally a house"[45]. In 1959 in an article entitled "Myth and reality of Le Corbusier" Ponti wrote: [46]

> […] in the tireless and surprising developments of a poetic flair, [surpassing] the linear schemes of the modern academism. This aspect is totally different from the one determined by the famous slogan on the house "machine à habiter" which constituted the biggest misunderstanding about Le Corbusier, who never dreamed of letting us live in a machine, but who foresaw, with intelligence, the usefulness and the good value with which our beautiful machines are made.

Therefore, since the first editorial of Domus in 1928 entitled *La casa all´Italiana*, Ponti promoted his interpretation for the ideas of the *modern living* – although based on functionalist principles, for Ponti the Italian domestic culture was an indispensable reference[47]. Therefore, he proposed not only a *house of order* – respecting sectorization, functionality and habitability needs, but also an *inhabited house*, attending "a common Latin sense", where the "need for space encountered nature; thus the presence of balconies, terraces, and patios; art and decoration,

colors and textures, - ultimately, where "comfort" was associated with culture and traditions[48]. Accordingly, in Ponti´s inner environments furniture acted as a design tool, transforming the house into a *living organism* - but a flexible one, subject to changes and moods of the dwellers, through the making of *atmospheres*, with a place for objects and books, reflecting personal lifestyles[49]. As a result, walls and partitions were not static, were they made of glass, masonry or wood, inviting the residents to participate, to play. Moreover, by associating furniture with architectural elements such as walls and windows, Ponti created hybrid elements, freeing up space.

In 1954, Ponti published the *finestra arredata* (the *furnished window)* – his response for the "void left" on the modernist glass wall - the *pan de verre*[50]. This reinterpretation consisted of adding filters – or in Ponti´s words, a *human diaphragm* to the void left by the window. The *layers* were composed of shelves, paintings, and fixtures, turning the glazed surface into a piece of equipment – a *transparent furnished wall,* where architecture, interior, and furniture overlapped. By ultimately displaying possible shades and opacities, the inner and outer scenery changed, depending on the natural day or artificial night lights.

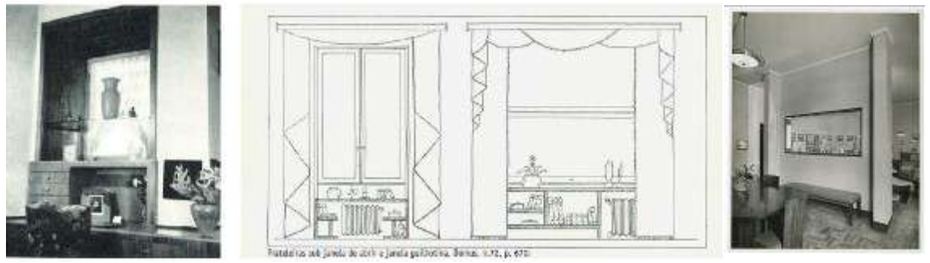


Fig. 1

3.2. From the *finestra-vetrina to the finestra arredata*

In December 1934, in an article entitled - *The ideas that I followed in some constructions*, Ponti published "simple steps for a correct design for a residential building"[51]. His intention was to contribute with solutions that not simply oriented the design of "horizontal windows rather than vertical" but instead, he advised on the conception of an "organism which will fully represent 'a way of living'"[52]. In the article, a series of "elements to adopt" were displayed, including Ponti´s built *typical homes*– the *Domus* apartments series – a group of buildings designed with rationalists' lines, but containing traditional elements of the Latin house, such as terraces, pergolas, balconies with vegetation and awnings. As Sophie Bouilhet-Dumas explained, for Ponti "roofs and facades [were] made to be lived in just like the rest of the house"[53]. During the 1930s, Ponti started suggesting a special combination of elements into the apartments´ interfaces. First, through the presence of a *finestra-vetrina* – the *display window,* in a preview of the *finestra arredata,* the balcony window embraced a decorative role; another attempt was to equip the exterior windows with shelves for books and objects; finally, the use of partition walls to divide rooms – the *divisione a diaframma*, the *diaphragm wall,* also containing a *finestra-vetrina*, the *display window* for placing decoration (Fig.1). Ponti´s advice on the magazine was to provide all these "inventions" to be given "in construction."

In the 1950s, "*la casa all´italiana*" would move forward into "*la casa attrezzata"* – the "*equipped house*", through the development of Ponti´s "morphological family" of furniture initiated in the 1930s[54]. Three different categories of hybrid furniture can be appointed according to its association with architectural elements - the already mentioned combination of the *diaphragm wall* and the *finestra-vetrina,* the *organized surfaces* – an organized composition of a wood panel base with shelves, fixtures, and pictures giving unity to the wall surface; - developed initially on the 1930s and 1940s, they would evolve into the *organized wall* and the *dashboard panels* series for the office and bedroom. Finally, in 1954, Ponti presented at *Domus* the *furnished window* – an evolution of the *display windows* and the *diaphragm walls* of the 1930s (Fig.2). By criticizing the void left by the modernist *glass wall* Ponti developed a window with shelves, frames and fixtures turned inside the room, fully transforming an architectural element into a piece of equipment:[55]

A room has, by its nature, four walls. A room with a large panoramic window has three walls and a void, the glass. It is a helpless environment. It is not closed; it is not a room. […] Why can't the room, instead, be reconstituted, that is, thought of four furnished walls, one of which is transparent? A window as big as a wall, the so-called panoramic window is a monstrous window; it is no longer a window, it is a missing wall. It is the exterior that enters the house, with its proportions that disproportionate everything, without a human diaphragm; it is a home violation. A transparent furnished wall is no longer a noticeably big window and reports everything to a human proportion. For this reason, Gio Ponti thought of transparent walls, composed of a vertical and horizontal pattern, where decoration […] could "keep out" the landscape and acted as a "foreground." […] When afterwards, the blinds are closed along the transparent (furnished) wall, it is no longer so [transparent], and here is the environment reconstituted in its four walls, instead of having only three walls and the window as a closed hole or hidden by a curtain. […] from the inside" the exterior is always seen through the foreground of the furniture. And this is its charm.



Fig. 2

In 1954 Ponti presented at the Milano Triennale a studio apartment with the *furnished window* as part of his response for the minimal lodging; the system was built as an internal frame with divisions coinciding with the window mullions; between the window and the wood frame structure rested the Venetian blinds to be operated from the inside. [56]

3.4. The Via Dezza apartment building, 1957



Fig. 3

In 1957 Ponti finished the Via Dezza apartment building in Milan, designed with an independent concrete structure[57] (Studio Ponti-Fornaroli-Rosselli). Having as the main feature the front layered facade, the building was designed to present "a superimposition of balconies" with hollow and closed metal sills corresponding to the different apartments, "according to the sales"[58]. The *finestra arredata* was imagined firstly to be present in all apartments and envisioned the possibility for the dwellers to decide its composition and color choice, which included those of the balconies and shutters – as much as Le Corbusier´s *polychromies*, although with more flexibility. But Ponti´s design also sought the night vision, as he planned for all balconies to have an outlining night light which, added to the inner apartment's interior sights through the depicted voids and silhouettes, would reveal, according to Ponti, "a spontaneous" aspect, depending on the chosen compositions[59]. Although Ponti´s attempts for diversity, the built construction reveals a balcony size variation only on the third and last two upper floors, having a symmetric division from the fourth to the seventh floors. Nevertheless, and even presenting the *finestra arredata* only on the last floor – Ponti´s family apartment, he could achieve a great variety of windows' shapes, colors, and sizes demonstrated on the actual overall facade.

A protagonist in its own, Ponti´s penthouse (Fig.3) resembled a demonstrative apartment; - designed in its minimal details, it contained all his *inventions* for the "modern living". In his "solar" home – as Ponti referred to it, flexibility and openness were the mottoes. Therefore, the 160m^2 apartment was centered on a different family lifestyle - a unified space with the possibility of maximum openness and vision, as represented in the plan by the Pontian drawn arrows. Having this in mind, the arrangement was organized to allow the main bedrooms and living room to receive the maximum of light and views, thus all facing the street; in order not to over compartmentalize the space, a Pontian *promenade* was created along the facade, thus conforming another layer. That was made possible by the combination of his *furnished window,* with perpendicular *moderfold* sliding curtains instead of doors between the rooms. Ponti´s utmost liberation of the space happened when the curtains were open allowing the views throughout the whole apartment, albeit a certain loss of privacy. The unity was also secured by the ceramic floor and ceiling patterns, in bright yellow and white stripes. Therefore, all the complexity of Ponti´s *human diaphragm* came to life in the Via Dezza apartment, as Salvatore Licitra explained[60]:

> The composition of the fronts of the apartment is enclosed in a sort of frame detached from the body of the building that suggests a unified perception, animated at night by the sense of domestic life seen in the illuminated windows.[…] In the daytime, the facade pulsated thanks to the composition of the colors of the balcony walls and of the panels inserted into the balustrades.[…] On the inside, the glass wall of the facade was organized with shelves, decorative elements, and panels, creating a direct exchange between the landscape and the family spaces.

5. Conclusion

Le Corbusier´s Immeuble Clarté inserted in the historical urban context of Geneva tests the Corbusian theses under specific conditions, creating a type of building manifested in a new way of living within a prefabrication prototype, with novelty and boldness for its time, either in technical-constructive terms, and the traditional characterization of a residential building. The *pan de verre* - "the conquest of modern times"[62], stands out in the Corbusian work for its complexity in characterizing the interiors, bringing together the subdivision of its modulated parts with the different functional specificities coordinated with the human scale. There although he uses the architectural elements to define the inner environments, his employment of color and the transparencies reveals the dynamic organization of inner spaces bringing them closer to what would otherwise be a cold and neutral surface. However, the biggest highlight is from the functional point of view: the balconies constitute an external layer acting as a filter or diaphragm for sun protection, the first step to the research, and the use of brise-soleil, a characteristic element of his post-construction works.

In his 1957 book *Amate L´Architectura*, Ponti dedicates a section to the "window". For him, it is synonymous with life, as "with the windows begins the mysterious game of architecture". He refers to facades as architecture reduced to graphic art. And he ends up by saying: "What about the furnished windows? They are my passion.[63] By examining and comparing both works (Fig.4) – Corbusier and Ponti´s – many similarities can be appointed – and especially in the use of the independent facade to act as *diaphragms* to the human life to happen inside, but if Corbusier´s filter could be interpreted as a technical and functional one, defined by his vision of the *house as a machine*, Ponti brings a little "fantasy" to it, adding to this formula his vision for the *casa all´italiana* as for Ponti, "certain houses are to be strict and closed organisms from the outside, fun and surprising on the inside. Like a sonnet, they are a fantasy within a rule"[64].



Fig. 4

Notes

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Image Captions

For images of the plan and interiors of Le Corbusier and Pièrre Jeanneret, Immeuble Clarté, see: https://lecorbusier-worldheritage.org/en/immeuble-clarte/
Fig. 1. Left. Gio Ponti, Finestra Vetrina at Apartment Marmont, *Domus* n.94, p.9, August,1935; Middle: "Annotazioni dell´ architetto", *Domus*, n.72, p.670, 1933 ; Right : Gio Ponti´s Divisione a diaframma, Case Tipiche, 1934, Studio Ponti – Lancia © Gio Ponti´Archives.
Fig. 2. Gio Ponti´s Finestra Arredata, 1954, © GioPonti archives.
Fig. 3. Left : Gio Ponti´s Via Dezza apartment plan, 1957 © Gio Ponti archives ; Middle : Gio Ponti´s Finestra Arredata, interior facade of Gio Ponti´s Via Dezza Apartment, 1957 © Gio Ponti archives, Right : Interior facade corridor at Gio Ponti´s Via Dezza Apartment. 1957 © Gio Ponti archives. Via Dezza Building by Studio Ponti-Fornaroli-Rosselli.
Fig. 4. Left: Via Dezza Apartment Building Exterior Facade, Studio Ponti-Fornaroli-Rosselli, Photo by Angelica Ponzio, 2009; right: Gio Ponti´s Day and Night sketches of the Via Dezza Apartment Building, 1956 © Gio Ponti´Archives; for exterior images of Le Corbusier and Pièrre Jeanneret, Immeuble Clarté Clarté´s see: https://lecorbusier-worldheritage.org/en/immeuble-clarte/

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Acknowledgements

The authors would like to thank the support of the Gio Ponti Archives in Milan which have contributed to the research on Gio Ponti´s oeuvre.

Biography

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Urban Predation

The symbolic economy of the pixo

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Abstract

This essay proposes an analysis using the “symbolic economy of predation” to provide new perspectives on the question of *pixo*. For this, *pixo* will be considered as any act on walls, building facades, asphalt, or monuments rejecting the hierarchical separations between writing, scribbling painting, or graffiti imposed by the art system and other institutions.

In Amerindian ontology, as Viveiros de Castro describes, the feeding regime is the predominant model upon which relations are perceived. The predator and prey duality stands as the archetypical role ruling interactions between different subjectivities and perspectives. This “symbolic economy” permeates social relations and translates them into a particular epistemology shared by many indigenous peoples throughout the Amazon region.

We aim to consider the relationships between those who practice *pixo* and the city through an analogy with the predator and prey dialectic. We argue that, on the one hand, these taggers get symbolical dominion over the city’s territory by marking places with their signatures, thus gaining recognition from their peers; on the other, the city - represented by formal governmental and economic institutions - preys upon taggers by criminalizing their practice as vandalism and by socioeconomically excluding peripheral populations, thus denying their access and right to the city itself. *Pixo* is a reaction to the passive role imposed on society that gains critical and artistic qualities as a practice of protest, endorsing its predatory performance.

This analogy intents provide a new perspective to describe the city and its complex relations with the aesthetical and social realities of its inhabitants. A distinct description of the urban relations that might enable planners and policymakers to evaluate socio-political phenomena within the city through a new set of lenses, allowing the development of innovative approaches to tackle and decriminalize conflictual practices as the *pixo*.

Keywords: Pixo, predation, symbolic economy, urban art, urban anthropology.

> If ‘culture’ becomes paradoxical and challenging when applied to the meanings of tribal societies, we might speculate as to whether a ‘reverse anthropology’ is possible, literalizing the metaphors of modern industrial civilization from the standpoint of tribal society. (Roy Wagner, The Invention of Culture)

1. Introduction

Given the urgent need for an emancipatory reassessment of our history - especially since the violent and eugenic Modern Age’s colonization processes - this essay proposes an analysis based on Amerindian ontology providing a new perspective to describe the city and its complex aesthetical and social relations. As an exercise to strengthen the understanding of the complexities of our time, it uses the “symbolic economy of predation”, described by the Brazilian anthropologist Viveiros de Castro, and offers a different point of view on the question of *pixo*. This activity, also referred to as graffiti, involving acts on walls, building facades, asphalt, or monuments, has a conflictive relationship with the urban environment, a reaction to unequal and discriminatory conditions in the city with critical and artistic content materialized as a form of visual protest on the urban scenery.

The goal is to consider the relationships between those who practice *pixo* and the city through an analogy with the predator and prey metaphysics (Viveiros de Castro 1996). We argue that, on the one hand, artists from the periphery get symbolical dominion over the city’s territory by tagging places with their signatures, thus gaining recognition from their peers; on the other, the city - represented by formal governmental and economic institutions - preys upon them by criminalizing their practice as vandalism and by socioeconomically excluding low-income, peripheral, black and non-white populations, denying their access and *right to the city* (Lefébvre 2010).

2. The Pixo

Pixos are interventions on elements of the city that may involve writing, graphics, or drawings and today are characteristic of several large urban centers. Mostly defined by the vandal act of interfering in the urban space, they present an almost infinite variety of elements and themes (Pennachin 2003, 5). Although contemporary graffiti is considered to be a derivation of the New York subway paintings from the 1970s, it names an old performance. “The term graffiti (...) was used for the first time to describe the set of unofficial mural manifestations in the city of Pompeii”[i]. *Pixo* has existed since antiquity as a form of manifestation in public space and even before in prehistoric records found in the caves[ii], presenting itself as an important representation of its contemporary way of life. These expressions gained visibility and momentum especially since the 1970s, taking over New York. The aesthetics of tags (signatures) and pieces (inscriptions on a larger scale) spread to other cities through train wagons, movies, album covers, and other exchanges. Having "appeared in the counterflow of urban planning and mixed with other random interventions in contemporary cities, such as election propaganda, advertising, love messages and words and images considered obscene"[iii], the graffiti quickly covered many cities in the country and abroad. During the 1960s in Brazil and France, walls, monuments, and public spaces carried political and protest messages, a time coinciding with dictatorial regimes in the Americas. Since then, graffiti *and pixo* have established themselves as a powerful way of producing identity and communication, becoming characteristic of several large urban centers worldwide. They are complex visual messages (Pennachin 2012, 31) that, even with different styles and approaches, use space and the city as a support for expression.

> Just as there are different types of graffiti, there are also different styles of *pixo*. In addition, these languages often appear unified in the same work, which makes it impossible to segregate them. Graffiti artists themselves, many of them also *pixo* artists, face difficulties in defining exactly where the graffiti ends and the *pixo* begins, and vice versa. (Pennachin 2003, 4)[iv]

Like any complex activity, the *pixo* deserves to be analyzed in all its multiplicity: culture, plastic practice, communicative tool, and urban experience (Junior 2012, 17). Far beyond the tags scattered throughout the city, graffiti designates a plural experience of the contemporary urban environment that involves living, observing, being, and acting in the city[v]. Performing *playful transgressions* (Ramos 2007, 3), these agents transform the city into a true space of communication (Pennachin 2003, 7). Thus, it is crucial to defend a broad, non-delimited vision of *pixo* and other urban graphics, both for its aesthetic and performance plurality, as well as for the ambiguity of its social acceptance - whose extreme repression occurs by the unjust (commonly racist and classist) criminalization of its agents whenever there is no presence of the art market or institutional promotion for the same practices. We believe that the segmentation of *pixo* must happen only to understand its nuances, complexities, and scope, but that this should not be done in an attempt to exclude or condemn its part that is outside the art system. Despite the intense socio-spatial segregation, the city is made up of all its elements including suburbs and peripheries where most of the workers live, especially in the metropolises.

“After all, the city belongs to everyone, that's for sure and the graffiti proves it” [vi]. In contempt of the controversial vandal power of *pixo*, it is an activity marked by the conviviality and companionship of very diverse agents who use and build the city in a libertarian way. We defend the *pixo* as a subversive art against an excluding city.

> [Graffiti New York trains] made it possible for us to realize that other voices wanted and want to be heard, that other historical subjects exist in opposition to the official daily media that disseminate and sustain the society of the spectacle. They led us to perceive other forms of occupation of urban space and artistic perception. (Ramos 2007, 4)[vii]

3. The symbolic economy of predation

Brazillian anthropologist Viveiros de Castro explains how Amazonian cultures consider the *ways of living* as the common existential ground for different species, not *physical matter*. In this paradigm, the body and the human or animal forms are bound to perspective and are not ‘real’ across every level of experience. Many indigenous peoples understand that ‘humans’ inhabit other bodies when seen by the eyes of other species. The appearance of beings is relative to the point of view of the observer and it changes, for example, as the shaman crosses between different perspectives (Viveiros de Castro 1996). Contrary to Western notions of *multiculturalism*, the prevalent Amerindian epistemology is that of *multinaturalism:*

> This simple statement [“our bodies are different”] captures with elegance what Viveiros de Castro (1996) named as cosmological perspectivism, or multinaturalism: what distinguishes the different kinds of people are their bodies, not their cultures. (Peter Gow, apud Viveiros de Castro 2002, 138)[viii]

Viveiros de Castro uses the example, found in Levi-Strauss, of the different reactions Europeans and the Amerindian supposedly had when facing each other for the first time, in the beginnings of colonization. While the former questioned if the indigenous people had souls (and if, by extension, could be enslaved or religiously converted), the latter questioned if Europeans had normal bodies or were like spirits, wondering whether their bodies would rot after death. This difference demonstrates how conceptual notions of animality, humanity, divinity, and their relationships vary between the two ontological regimes. In other words, what is considered by these indigenous peoples as “given” or “innate” is culture, not the physical composition and appearance of bodies which are, in turn, seen as “constructed” (Viveiros de Castro 2015; Wagner 1981). The body in that sense “is implied in the concept of the perspective” (Viveiros de Castro 2002, 140)[ix]. In this ontological paradigm, the reality is organized not by the material physicality of the world or by the objective relations between given things, but by the relational positions between beings and their different stances of existence. These relations are not characterized by the descriptive equivalence of their manifestation at the eyes of the subjects involved: the physical account of a relationship does not encompass the totality of its underlying reality but appears as a relational truth only valid to a particular perspective, analogous to a symptom. For example, what humans experience as a disease can represent that, whoever is ill in our perspective is, from the jaguar’s point of view, a pursued prey. A clarifying example can be found in Bonila’s studies on the Paumari people, showing how predatory relations are perceived by these particular people as relations of trade:

> [W]hen a Paumari fisherman kills a *Pirarucu* (baba’di), it is not its *abonoi* (soul-body) that is hit. What he, the fisherman, sees as the *Pirarucu* is just a mat (*jorai*) that the *Pirarucu’s* pamoarihi gives him in exchange for the arrows or ammunition (those used by the fisherman). Thus, every predatory act is conceived as a trade (or a gift) between a Paumari hunter or fisherman and the *pamoarihi* (human/social form) of the prey (*igitha*). (Bonilla 2005, 51)[x]

Viveiros de Castro shows that the interpretation of phenomena in a pattern of predation (usually the performance of a hunt) is the primary way in which relationships are explained in Amerindian epistemology. The so-called “symbolic economy of predation” is the preferred way in which phenomena are thought of and explained. In other words, the concept of “humanity” for the Amazonian peoples is often “derived to the primary positions of predator and prey, that involve necessarily other collectives, other personal multiplicities in the situation of perspective otherness” (Viveiros de Castro 2015, 32)[xi].

The notion employs a series of archetypes or concepts that embody the relational positions between agents and characterize their roles. The jaguar, the human, and the pig concentrate most of the ideas of predation in its different agencies, respectively: the predator (who hunts the observer’s people), the subject (or observer; the one who experiences the described point of view) and the prey (who is

hunted by the observer's people). Shifting the subject position changes the appearances (or bodies) of the agents: humans appear as jaguars to the pig's eyes, which in turn sees itself as human. The same goes for their material and social worlds: "the animals", says Viveiros de Castro, "experience their habits and characteristics by a cultural perspective". The jaguar "sees blood as corn beer" (Viveiros de Castro 2015, 30)[xii]; the pink river dolphin "lives, in the river and lakes of the Purus, in his village with its people; makes its parties; speak its language; gets married and has children" (Bonilla 2005, 50)[xiii]. In short, "non-human agents perceive themselves and their behavior under the form of human culture" (Viveiros de Castro 2015, 35)[xiv]. In that way, the "reality" does not lie in the concrete manifestation (the form) of objects and things but on the quality, the content - the relationship between agents is therefore eminently social. The Paumari social structure, for example,

> is constituted by potentially human collectives, be them animals, plants or objects. Everyone possesses, individually, the potential capacity of adopting a human form and, collectively, all beings and objects are potentially social. (Bonilla 2005, 51)[xv]

The symbolic economy of predation can be understood as a "theory of mind applied by the native, a way to solve - or better, dissolve - the eminently philosophical problem of the 'other minds'" (Viveiros de Castro 2002, 130)[xvi]. Therefore, not only the relationships between species are understood in this discursive framework, but also the relations between individuals of the same species: social phenomena within human society are also often described and explained in the terms of the predation economy[xvii]. As shown by Bonilla (2005), it is by this epistemological base that the *Paumari* make sense of the encounters with Western society. The concept of *patrão* (boss) is ressignified by the Paumari and incorporated in their cosmological views, a movement that, in turn, qualifies their relationships with the *regatões*[xviii] by the perspective of their predation-commerce logic[xix]. Familiar with being *prey-clients* with spiritual entities, the Paumari incorporate the symbolic values of their cosmological interactions in the economic transactions with Western people. "It is like the dynamic of the subjection, historically imposed on the region, was digested and inverted in the relation Paumari system", says Bonilla (2005, 48)[xx]. The predation is thus a signifier, or better yet, an "activity of symbolization" of other interactions in Amerindian's practice of meaning, through which the relationships are accessed, evaluated, and addressed or, in other words, through which phenomena are socialized[xxi].

If the relationships with white and Western societies are frequently perceived by the indigenous peoples through the logic of predation, why not use this logical system to look at our interior relations from a different perspective?

4. The symbolic economy of pixo

Donna Haraway, a remarkable scholar in the field of science and technology studies, speaks of the supposedly neutral "eye position" in science - that allegedly allows for objectivity in the scientific endeavor - as being, in reality, a white and male privileged point of view (1988). Then, what could looking to society from a radically different pair of eyes entail? In light of the abovementioned insights, we propose to look at the city through the lenses of the symbolic economy of the predation, targeting the complex relationship between the institutionalized urban apparatus and its territorial correspondent with the practice of *pixo*.

The predation relations between the city and the *pixador* (*pixo* artist), although very complex, orbit questions of territory[xxii]. Its genesis can be based on the unequal access to the *right to the city* (Lefébvre 2010), to its environment and sociopolitical affordances. On the one hand, the city - represented by formal governmental and economic institutions - preys upon *pixo* artists by socioeconomically excluding peripheral populations; on the other hand, its origins as a form of urban art marks its close relation to a practice of resistance. More specifically, the graffiti and *pixo* spatialize and materialize the abstract urban political inequalities and dissatisfactions, marking them in the territory and bringing social struggles to the visual sphere. The artists get symbolic dominion over the city's territory by marking places with their signatures and graphical pieces, as a rebellious act in opposition to institutionalized and economic oppression. By tagging the city's environment with their critiques, they attempt to reclaim the (physical and political) territories from which they are excluded or alienated.

Following Alfred Gell's *abduction* approach (1996), it is possible to understand the practice of *pixo* as a trap set up by peripheric artists to capture the aesthetic discourse of the urban environment, claiming the "image of the city", or rather reinventing it. The anthropologist argues that the indigenous trap can be interpreted as a (photographic) negative of the hunter's body and action, an embodied version of him that replaces his presence and practice, both spatially and temporally. In such a way the trap gains the status of art by encompassing and merging the roles and bodies of hunter and prey, the act of hunting and of being preyed upon, the temporal and spatial dimensions that *verbalize* the hunt. Doing precisely that, the *pixo* works as a symbolic trap: as they force themselves and their aesthetics in the urban environment, using blank and left-over surfaces, privately or state-owned

building facades, and seeking places of high visibility, tags, pieces and murals force their recognition as signs and infiltrate the visual archive of the city. Just like the hunting trap, the practice incorporates and reflects a negative image of the city and uses it against it. They rely on the State's tendency to negate and hide the social contradictions of society and defend private property to gain symbolic momentum, gaining artistic quality as practices of criticism and exposure of the city's contradiction and affirming the predatory position of the artists.

Yet again, besides socioeconomically excluding the low-income and peripheral classes to whom the *pixo* artists belong, the city seeks to reestablish its commanding position by criminalizing *pixo* practices as mere vandalism and by mobilizing its violent surveillance facets to repress it. The city, as such, presents a second predatory face in response to the resistance act of the *pixo*.

The "city"' seen as a "thing" brings with it a depersonalized character, deriving from the *particular versus universal* dichotomy in modern epistemology. However, the symbolic economy of predation shows the possibility to see both the institutions and its agents as personalized actors that take on predatory roles - both to themselves and to others. The distinction between treating the city as a "thing" or as a "person" is the institution of agency (Gell 2018); it shows how the institutional "city" is itself contradictory and complex in ways that can be read as predatory positions with different perspectives. It also helps to explain these contradictions by clarifying its internal relations.

> Whoever answers to a "you" called by a non-human accepts the condition of being its "second person" and, when assuming in turn the position of "I", will already do it as a non-human. [...] The canonical form of these encounters consist, therefore, in the intuition that the other is "human", that it is *the* human, which automatically dehumanizes the interlocutor, transforming him in prey, that is, in an animal (Viveiros de Castro 1996, 135)[xxiii]

This potential of *challenging* the given cosmological position represents how the common relations between beings can be inverted, carrying with it the danger that it may constitute. The perspective position of a predator is not permanent but, on the contrary, implies the constant possibility of becoming the prey. The tension resides especially in the actualization of the predation act because, in it, the agents' subjectivities encounter. The non-human speech, in our analogy, is the public recognition of the "city" as a responsible agent, or, in other terms, its personalization by civil society. Calling out on state oppression is a form of placing it as a subject under the second person pronoun, that is, making it responsible for the actions it performs, distinguishing its position as an identifiable subject and, more importantly, questioning it in the lexicon (and the perspective) of the accusatory[xxiv]. This lexicon, which may take the form of discourses like human rights, class struggle, racial discrimination, or the value of art, symbolically turns the "city" into a "being", giving it a "body" that, in turn, is subject of becoming prey. The challenge to the city, performed by the *pixo* artists when reclaiming the territory, is an act of reclaiming the subjectivity of the relation, which puts them in the predator role. Subjectivity is proper to the predator; the position of speech institutes the territory and the positions of the agents in it.

Therefore, the policeman can be seen simultaneously as predator and prey, from his perspectivist point of view and in the network of his relationships. He is both part and non-part of the city; representing it only insofar as the predation hierarchies remain stable. The city is ready and able, at all times, to re-personalize him, to reinstate his individuality and personality, in case its position as predator risks being challenged. When threatened to become prey, claiming "isolated cases" and "bad-apples" is the city's way of offering sacrifice to the public opinion, securing its symbolic position. The policeman is both the avatar and the scapegoat of state violence, in a suspended, *schrödinger*-like way. This duality - or better, this *ambiguity* - allows the city to maintain itself in the outskirts of its violent method, to use it without engaging directly in the uncertainty of the act itself. The predation act is unruly, uncertain, and dangerous: its actualization carries the possibility of its inversion, if not performed correctly[xxv] - the contact between beings can bring about the other's subjectivity, with potentially lethal implications. To avoid that, the city takes hold of the policeman's individuality, cannibalizing itself to maintain the *status quo* of the symbolic economy.

On the other hand, the policeman negotiates this relation from a similar point of view to that of the *pixador*, as they also come from mainly peripheral and low-income backgrounds. Becoming a police member is a way of acquiring a new body, a new position in the power relations of the urban environment. Like in the indigenous cosmology, this "passage" often involves assuming an antagonistic position about the original perspective: becoming the predator of the former kin. The cries of activists showing the contradiction of black officers terrorizing black residents of the slums and reproducing structural racism, often gaining the (not unproblematic) sobriquet *capitão do mato*[xxvi], is a reflection of this antagonism. If the ritualistic exchange of bodies in Amazonian cosmology often involves wearing different costumes (Viveiros de Castro, 1996), the policeman wearing his uniform shapeshifts into the predator of other (mostly black) citizens. However, the passage configures a new relation with the former predator that doesn't invert it: it is not a challenge, but a sacrifice. As the

Paumari “client”, the “services” of the policeman, are a way by which he controls his predation, keeping it at bay: a form of damage-control that resolves the relation with the predator and simultaneously provides a possible subjectivity, namely the *enforcer of the law*.

> [T]he Paumari position themselves when relating to others, today, [...] as clients or employees. I do not believe that it is just a way of avoid or go round the predation (and much less of compensating it), but a deeper way of living it, of really actualizing it. (Bonilla 2005, 52)[xxvii]

The case of the *pixo* is clarifying because it shows the many territories in which subjectivity is disputed or, in other words, the battlefields over the influence on urban narratives. Similar to the territorial predation of the city practiced by the *pixo* artists, its reconquest by their entry into the art market can also be interpreted as an invasion of spaces that were historically denied to them - in this case, the spaces of the art market, of symbolic and financial valorization promoted by art institutions and art discourse.

Regardless of the unstable recognition of graffiti as art in popular opinion, galleries and collections quickly incorporated this production with their usual avidity[xxviii]. Even before the first art galleries focused on graffiti appeared in the 1980s, this practice was already integrated into the art world by the insertion of graffiti pieces into traditional galleries through photography. Several factors contributed to the absorption of graffiti by the art market in this period[xxix]. From the beginning, however, so-called graffiti paintings had a very different connotation on canvases and on gallery walls, which makes explicit the heterogeneous aspects of its existence. In the logic of predation, the active entry of the *pixo* in the art market can be seen as the transformation of these artists into predators, accessing new social instances, and increasing their communicative reach. The art market, as the institutionalized city, assumes a pacified stance, offering a share of itself to this new uncontrollable and rivaling aesthetics, as a sacrifice to remain relevant. On the other hand, evaluating the market by co-opting the aesthetics of the streets, the *pixo* appears now as prey, entering a financial system far distant from its rebel origins. Similarly to the policemen, artists navigate the logic of the art market from a more stable condition, as employees.

Despite the absence of street emotion, according to Pennachin (2012, 122-134), the repercussion of this indoor exhibition was positive in the public and the media, catalyzing the acceptance of *pixo* artists as legitimate artists. Fame and visibility are clear objectives of *pixo* artists, being a much better alternative than facing police violence and other physical risks, and there was much support for media appearances and commercialization. With the rising pop culture, a new era of art and mass culture was established and the graffiti further occupied spaces previously exclusive to erudite production, consolidating its predatory position in this new symbolic territory. Alongside hip hop culture, graffiti tensions the limits of the dominant culture to attack its commercial and class interests, uncovering new subjectivities that are not committed to the official history (Ramos 2007, 9).

The production of graffiti for the market was influenced by this context and its agents (dealers, collectors, gallery owners, critics, and other artists). Some analyze this as a maturation of the work of these artists, but what interests us is how there is a manipulation made by the market so that the production of these works befits the logic of collectible objects with high prices, through an aestheticization of graffiti with a more palatable and less political result. Once again, the predator-market feeds on what comes from the streets. The art system fragments its production and includes only what it’s considered formally artistic, excluding *pixo*’s vandal character and emphasizing the plastic dimension as the main quality of graffiti - which alone cannot account for the plurality of this action (Junior 2012, 35). The consolidation of this separation between the act of *pixo* on the street and the *pixo* as a salable work of art reaffirms the marginalization of the *pixo* outside the galleries, where both pixo and graffiti remain criminalized practices (Junior 2012, 38). Once more, the *pixo* becomes the prey, excluded from the city, and pursued by its institutions.

Despite being incriminated, graffiti became vigorously global with its entry into the art market (Junior 2012, 38). The *pixo*, by its predatory challenges, became an important context of social expression and contestation, questioning the prospective positions of private and institutional limits and being especially characterized by this insubordinate form as it manifests itself (Pennachin 2003, 6). Nonetheless, “the production for the galleries keeps an insurmountable distance between the street production”[xxx], showing the complexification of the predatory pronouns inside the practice itself. This oscillating character of the *pixo* emphasizes the conflictual situation of the art, in the changes and shifting of the predatory positions, as the pixo artist returns to the condition of predator precisely in the act of reclaiming the city and using its space:

> By articulating the dominant information with the communication and the common opinion of urban agents, the graffiti establish democratization, the horizontality of the political relations of occupation, and vertical domination of the programmed urbanist policies. Graffiti & *pixo* make it possible to perceive a new epistemology for the city and for art, no longer seen and thought from a Renaissance or Eurocentric vanishing point, but fractal, participatory, and activist. (Ramos 2007, 10)[xxxi]

5. Conclusion

A distinct description of the urban relations may enable urban-related disciplines to address socio-political phenomena within the city through a new perspective, granting the development of new approaches to handle conflictual practices such as the *pixo*. The possibility of conceptually “personalizing” institutions, collectives, or practices allows for flexibility of analysis between humans and “non-humans” (in this case, the city) as agents with equal footing in the constitution of the social phenomena. With it, we can abandon the notion of politics, economics, and culture as ‘backgrounds’ that, when analyzed together with individuals, frequently become static elements against which agency is investigated. Additionally, it becomes possible to analyze the apparent ‘thingness’ of institutions as a real phenomenon: knowing that institutions such as the “city” or the “State” are not real “people”, what is the function of this personalization? How does it work and what are its effects, once realized? Viveiros de Castro shows that the common dichotomy between appearance and essence, viewed through the lenses of Amazonian cosmology, gains new colors (2015). *Appearing as* is a cosmological approximation, a way of partially and momentarily *becoming*. It is not so much a question of disguising essence, of what is *hidden* by appearance, but of what it *adds* to that essence. It is possible to perceive in the personalization of the institutions the abstraction of individual agendas, their transmutation into concrete phenomena and devices, and their enforcement - such as the geographic segregation, legal apparatus, and the legitimized use of violence. If predation in the urban environment is territorially based, the parcel of a society that benefits most from it, be it economically[xxxii] or in terms of the access to the city, structures the “state” and the “city”, or rather *becomes* them and, by doing so, reinvents itself as something bigger than what it originally was: it captures the discourse, the territory of subjectivity, inventing for itself a first-person pronoun.

Our main objective, however, was experimental. Far from wanting to represent, in any sense, the indigenous vision or to act as their spokespersons, our method is designed more as an artistic endeavor of placing the anthropological view on indigenous epistemologies as lenses through which we gaze at the city - “an experience of thought, or an exercise of anthropological fiction” (Viveiros de Castro 2002, 123). We do not claim to own or to incorporate indigenous narratives, nor to speak as avatars of diversity, but rather the opposite: by acknowledging our position inside Western views, we intend to challenge it, to address it with these foreign lenses - “what happens if the translator decides to betray his language?”, Viveiros de Castro asks (op cit.). In that sense, our objective is not to pretentiously reaffirm the validity of Castro’s analysis of indigenous cosmology, neither to state anything about them: it is about the experiment of self-criticism, of gauging our feet by trying different pairs of shoes. More specifically, we use these cosmologies to allow a different perspective of the city, reversing, in a way, the “coloniality of the seeing” present in the modernity discourse that still permeates urban thought (Barriendos 2019). Understanding anthropology as a “practice of meaning”, we point it to the city, loaded with discursive and conceptual expressions of a different “possible world” (Viveiros de Castro 2002); as an artistic attempt at a “reverse” or “symmetric” anthropology (Wagner 1981; Latour 2005). This is an imaginative exercise that uses our interpretations of these narratives as a critical device to re-view the urban environment - a decolonial(list) attempt to repositioning the way of seeing. Poetical epistemicide?

Notes

1 Free translation by the authors from “O termo graffiti (...) foi utilizado pela primeira vez para descrever o conjunto de manifestações murais, não oficiais, da cidade de Pompeia” (Junior 2012, 11). Approximately 10.000 graffiti survived the eruption of the Vesuvius volcano, manifestations made before the disaster during the Roman Empire.

2 “The prehistoric records found in the caves, in addition to confirming the human need to exist symbolically, are indispensable sources for understanding the culture in force at that time.Following this line of reasoning, nothing prevents urban graphics from being attributed the quality of current documents, as they are legitimate expressions of the contemporary way of life.”, free translation by the authors from “Os registros pré-históricos encontrados nas cavernas, além de confirmarem a necessidade humana de existir simbolicamente, são fontes indispensáveis para o entendimento da cultura vigente naquele período. Seguindo esta linha de raciocínio, nada impede que se atribua aos grafismos urbanos a qualidade de documentos da atualidade, pois eles são expressões legítimas do modo de vida contemporâneo.” (Pennachin 2003, 8)

3 Free translation by the authors from “Surgidos no contrafluxo dos planejamentos urbanos e misturados às outras intervenções aleatórias nas cidades contemporâneas – propaganda eleitoral, publicidade, recados de amor e/ou palavras e imagens consideradas obscenas” (Ramos 2007, 1)

4 Free translation by the authors from “Assim como existem diversos tipos de graffiti, há, igualmente, estilos diferentes de pichação. Além disso, muitas vezes estas linguagens surgem unificadas numa mesma obra, o que impossibilita a sua segregação. Os próprios grafiteiros, muitos deles também pichadores, enfrentam dificuldades em definir com exatidão onde termina o graffiti e começa a pichação, e vice-versa.” (Pennachin 2003, 4)

5 “The urban graphics that we see scattered over the walls are the result of a process in which the writer (used here as a synonym for graffiti artist and / or pixo artist) assimilates and internalizes various elements of the urbanity in which they live, processes them and interact with them, to later return them to the external environment in the form of graffiti or pixo.”, free translation by the authors from “Os grafismos urbanos que vemos espalhados pelos muros são o resultado de um processo em que o escritor (do inglês, writer, utilizado aqui como sinônimo de grafiteiro e/ou pichador) assimila e interioriza diversos elementos da urbanidade em que vive, processa-os e com eles interage, para posteriormente devolvê-los ao ambiente externo sob a forma de graffiti ou pichação.” (Pennachin 2003, 3)

6 Free translation by the authors from “Afinal, a cidade é de todos, isso é certo e o grafite assim o prova” (Ramos 2007, 9)

7 Free translation by the authors from “Os trens nova-iorquinos grafitados levaram e trouxeram mensagens. Foram criticados - e apreciados -, mas possibilitaram a comunicação entre o centro e a periferia, entre os artistas e o mercado. Possibilitaram-nos perceber que outras vozes queriam e querem ser ouvidas, que outros sujeitos históricos existem em oposição às mídias diárias oficiais que divulgam e sustentam a sociedade do espetáculo. Levaram-nos a perceber outras formas de ocupação do espaço urbano e de percepção artística.” (Ramos 2007, 4)

8 Free translation by the authors from “Este enunciado simples [“nossos corpos são diferentes”] captura com elegância o que Viveiros de Castro (1996) chamou de perspectivismo cosmológico, ou multinaturalismo: o que distingue os diferentes tipos de gente são seus corpos, não suas culturas.”. (Peter Gow *apud* Viveiros de Castro 2002, 138)

9 Free translation by the authors from “o corpo como implicado no conceito de perspectiva” (Viveiros de Castro 2002, 140)

10 Free translation by the authors from "[Q]uando um pescador paumari mata um pirarucu (baba’di), não é o abonoi (alma-corpo) dele que é atingido. O que ele, pescador, vê como pirarucu é apenas uma esteira (jorai) que o pamoarihi do pirarucu lhe entrega ou troca por munição ou flechas (aquelas usadas pelo pescador). Assim, todo ato predatório é concebido como uma troca (ou um dom) entre um caçador ou pescador paumari e o pamoarihi (forma humana/ social) da presa (igitha)." (Bonilla 2005, 51)

11 Free translation by the authors from “é derivada em relação às posições primárias de predador ou presa, que envolvem necessariamente outros coletivos, outras multiplicidades pessoais em situação de alteridade perspectiva.” (Viveiros de Castro 2015, 32)

12 Free translation by the authors from “os animais [...] experimentam seus próprios hábitos e características sob uma aparência cultural [...] os jaguares veem o sangue como cerveja de milho” (Viveiros de Castro 2015, 30)

13 Free translation by the authors from “o boto [...] vive, nos rios e lagos do Purus, em sua aldeia com seu povo; faz suas festas; fala sua língua; se casa e tem filhos.” (Bonilla 2005, 50)

14 Free translation by the authors from “os agentes não-humanos percebem-se a si mesmos e a seu comportamento sob a forma da cultura humana” (Viveiros de Castro 2015, 35)

15 Free translation by the authors from “é constituído por coletivos potencialmente humanos, sejam eles animais, plantas ou objetos. Todos possuem, individualmente, a capacidade potencial de adotar uma forma humana, e, coletivamente, todos os seres e objetos são potencialmente sociais.” (Bonilla 2005, 51)

16 Free translation by the authors from “uma ‘teoria da mente’ aplicada pelo nativo, um modo de resolver, aliás — ou melhor, de dissolver —, o problema eminentemente filosófico das ‘outras mentes’.” (Viveiros de Castro 2002, 130)

17 "Seguindo a lógica perspectivista, os índios selvagens, os Joima, vêem os Paumari como queixadas (hirari), e é por isso que, antigamente, costumavam caçá-los para devorá-los." (Bonilla 2005, 52)

18 The term “regatão” (plural: “regatões”) refers to the commerciants that buy and sell goods along the rivers in the Amazonian region. Their relationship with indigenous peoples are often conflictual and complex, with examples of debt-based slavery-like conditions of labour and other forms ox exploitation. See Christian Crevels "Patrões Selvagens: história e poética Madihadeni da alteridade” (unpublished manuscript, September 2020), typescript.

19 Free translation by the authors from "no contexto predatório, as presas, e até certo ponto também os fregueses paumari, trocam sua produção (objetos culturais ou alimentos) por bens manufaturados (chumbo, anzol, linha, rede, arpão)." (Bonilla 2005, 52)

20 Free translation by the authors from “É como se a dinâmica da sujeição, imposta historicamente na região, tivesse sido digerida e invertida no sistema relacional paumari.” (Bonilla 2005, 48)

21 "Providos de seu próprio ponto de vista, os igitha (presas) se posicionariam no seio da relação predadora, assim como os Paumari se posicionam ao relacionarem-se, hoje, com Outros, isto é, como fregueses ou empregados. Ora, não creio que se trate, aqui, apenas de um modo de evitar ou contornar a predação (e muito menos de compensá-la), e sim de um modo mais profundo de vivê-la, de atualizá-la realmente." (Bonilla 2005, 52)

22 The term “territory” used here is referent to the conceptualization by Marcelo Lopes de Souza, meaning a spatialized political relation. See Lopes de Souza, 2010.

23 Free translation by the authors from “Quem responde a um 'tu' dito por um não-humano aceita a condição de ser sua “segunda pessoa”, e ao assumir por sua vez a posição de “eu” já o fará como um não-humano [...] A forma canônica desses encontros sobrenaturais consiste, assim, em intuir subitamente que o outro é “humano”, entenda-se, que ele é o humano, o que desumaniza e aliena automatica-mente o interlocutor, transformando-o em presa, isto é, em animal.” Free translations by the authors (Viveiros de Castro 1996, 135)

24 This relation is similar to the traditional position occupied by the anthropologist when describing the native, as argued by Viveiros de Castro: “O antropólogo tem usualmente uma vantagem epistemológica sobre o nativo. O discurso do primeiro não se acha situado no mesmo plano que o discurso do segundo: o sentido que o antropólogo estabelece depende do sentido nativo, mas é ele quem detém o sentido desse sentido — ele quem explica e interpreta, traduz e introduz, textualiza e contextualiza, justifica e significa esse sentido.” (Viveiros de Castro 2002, 115)

25 Viveiros de Castro shows that many relationships between predator and prey must obey some rules to avoid the possible contact with the others subjectivity, an encounter that is most frequently deadly. Usually, these involve the proper preparation of food; the possible result is seen, most frequently, in the form of disease (1996).

26 The term “capitão do mato” was employed in colonial Brazil to denominate black people (often slaves themselves) that pursued and brought back fugitive slaves to the farms. The current use addressing black policemen or other black public figures is controversial, being seen by many as problematic or even downright racist.

27 Free translation by the authors from “os Paumari se posicionam ao relacionarem-se, hoje, com Outros [...] como fregueses ou empregados. Ora, não creio que se trate, aqui, apenas de um modo de evitar ou contornar a predação (e muito menos de compensá-la), e sim de um modo mais profundo de vivê-la, de atualizá-la realmente.” (Bonilla 2005, 52)

28 The streets interventions aesthetic is inside the white cube (Brian O'Doherty) at least since Jean-Michel Basquiat and Keith Haring in the 1970s. The first graffiti exhibition in New York was in the year 1972 (Pennachin 2012, 122).

29 The resumption of expressive painting, with the appreciation of gesture and the use of calligraphy, as opposed to the demands of traditional painting, boosted graffiti along with the effervescence of the market at that time (Veneroso apud Pennachin 2012, 132)

30 Free translation by the authors from “a produção para as galerias guarda uma distância intransponível entre a produção de rua” (Junior 2012, 38)

31 Free translation by the authors from “Ao articularem a informação dominante com a comunicação e a opinião corriqueira dos agentes urbanos, os grafites estabelecem a democratização, a horizontalidade das relações políticas de ocupação e dominação vertical das políticas urbanistas programadas. Os grafites & pichações possibilitam percebermos uma nova epistemologia para a cidade e para a arte, não mais vista e pensada a partir de um ponto de fuga Renascentista ou eurocentrista, mas fractal, participativa e ativista.” (Ramos 2007, 10)

32 The economical benefit associated with the "location value" is well explained by Paul Singer in his *O Uso do Solo Urbano na Economia Capitalista*, in *A produção capitalista da casa (e da cidade) no Brasil industrial*, Maricato (org), São Paulo, Editora Alfa-Omega, 1982.

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Elements of Architecture and Choreographic Objects:

A new critical viewpoint based on William Forsythe's City of Abstracts, and Oscar Niemeyer's Casino at Lake Pampulha

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Abstract

Bringing together distinct works by similarity does not always define the depth of critical analysis; it does not always promote the clarification of aspects that could be highlighted by their standard features or differences. Often, the formal similarity, given its superficial aspects, is disguised as an argument. In addition to formal issues, without, however, discarding them, binary analysis between operations in two different fields of knowledge is the central topic of this article. The exchange of terms already clarified in their fields of origin, which present operations in common, may reveal hidden aspects of the practice and are essential to new possibilities for understanding the works studied and, consequently, its criticism.

This article compares the concept of Choreographic Object, elaborated by the choreographer William Forsythe with the Elements of architecture. With this strategy, it is possible to bring the Elements of architecture, and the composition arranged by those elements, to a new complexity level. Choreographic Objects allows seeing that, in addition to the relationships established between Elements of architecture and the space they organize, there is a direct encounter between the Elements of architecture and a participant. The greater or lesser effort required by a ramp's inclination, depth duplication of an environment in situations of mirroring or projections, or even the narrowing or widening of passages such as corridors or tunnels are examples of this clash. In this background, movement — unrepresentable conventionally — is the protagonist of notational arrangements requiring new representation forms.

The article proposes a new critical bias, graphically demonstrated, when comparing William Forsythe's *City of Abstracts*, and Oscar Niemeyer's *Casino at Lake Pampulha*, through this viewpoint.

Key words: Elements of architecture, Choreographic Objects, Niemeyer, Forsythe.

1. Introduction

The central topic of this article is a binary analysis between operations defined in two knowledge fields — choreography and architecture — exemplified by William Forsythe's Choreographic Objects and the Elements of architecture, respectively. The Choreographic Objects[1] refer to artifacts that propose new spatial organizations in the places they are inserted. The Elements of architecture refer to constructive elements that define the organization of architectural space. Both propose direct actions to the participant, but in Choreographic Objects, the experience is superlative since they exaggerate the common experience by suggesting unusual incidents to the participant. The Elements of architecture, mostly commonplace, also present themselves with an exceptional character, which happens mainly in modern architecture, in which they become a category of invention. Sometimes, the operations proposed by both Choreographic Objects and Elements of architecture are similar. These coincidences are of interest to this analysis.

The Choreographic Objects' superlative possibilities, characteristics of the choreography field allow us to highlight the clash in encountering the Elements of architecture and participant. The greater or lesser effort required by a ramp's inclination, depth's duplication of an environment in situations of mirroring/projections, or even the narrowing or widening of passages such as corridors or tunnels are examples of this interaction. In this background, movement — unrepresentable conventionally — is the protagonist of notational arrangements requiring new representation forms.

Therefore, the approach of terms already clarified in their fields of origin, which have operations in common, reveal hidden aspects of the practice and open up new possibilities for understanding the work studied and, consequently, allow a refreshed viewpoint to criticism. The article proposes a new critical bias, graphically demonstrated, when comparing William Forsythe's *City of Abstracts*, and Oscar Niemeyer's *Casino at Lake Pampulha*, through this viewpoint. With this strategy, it is possible to bring the Elements of architecture as well as the composition arranged by those elements, to a new complexity level.

2. Elements of Architecture

As a brief definition of Elements of architecture (Fig. 1 left), we can utilize the Alfonso Corona Martínez reflection, especially about the transition from the classical repertoire to modern architecture. Elements of architecture are material things, *"the material substance of the limits that produce architectural space"*[2] (MARTÍNEZ, 2003, p. 99). Columns, doors, windows, panels, floors, walls, ramps, and roofs in the first instance. The change from a classical paradigm to a modern, the use of independent structure, and the geometrization of the Elements of architecture operate a change that relativizes them. Instead of been extracted from a catalog of solutions — as compiled in Durand's *Précis* — in the modern project, they lose their figurative identity:

> The twentieth century would be able to produce a new kind of element that was already heralded in the late eighteenth century: elements of generic, noncharacterized form; more precisely, elements that materialize simple geometrical forms". (Ibidem, p.108).



Fig.1

The relations between the Elements of architecture, that are materials things, and Elements of composition, that "*are nearer to concepts than to things*" [3] (Ibidem, p.99), assume, in modern architecture, ambiguous possibilities and new levels of complexity. Comprehended as elements of passage and connection, the Elements of architecture are responsible for a possible choreography in architecture proper to the articulation between the Elements of composition.

Regarding the glass wall, for advance in the analyze proposed in this article, the transfiguration, and the relation between wall planes, façades, and windows, what problematize de pair structure/enclosure, indicates an interesting focus, as Martínez demonstrates:

> Of course meaningful elements always will appear as figures over a ground; and the last is ideally neutral. That was the role of the wall plane, but the transparent skin is aesthetically reluctant to assume this role. In the first place, the function of the wall, that of separating inside from outside, is dubiously fulfilled by a glass wall, which is read functionally as a window. (Ibidem, p.107).

The ambiguous role of the glass wall cited by Martinez, added in this article by the mirrors wall and the projections on a wall, will approximate the Choreographic Objects and the Elements of architecture in the next points of this article.

3. Choreographic Objects

William Forsythe proposes objects that establish choreographies for the dancers of his company (The Forsythe Company 2005-2015). These objects can be fixed or installed in specific spaces or like prostheses on an earlier architecture. Initially proposed to act with the dancers, Forsythe emancipates them, thus presenting an autonomous situation. In these interventions, Forsythe suggests choreographies to the common participator — who doesn't have a proprioceptive system developed like dancers — in ordinary public spaces (indoor and outdoor) as in exhibition spaces, widening the domain of this objects. According to Forsythe:

> Thus, the introduction of the term "choreographic object" is intended as a categorizing tool that can help identify sites within which to locate the understanding of potential organization and instigation of action-based knowledge. With this tool, the proliferation of choreographic thinking across the wider domain of arts practice can be thrown into relief. (FORSYTHE, 2018. p.49)

There are several precedents for objects that serve to organize a choreography, as we can see in dance and theater examples[4]. However, this notion is problematized and updated by Forsythe. The way he introduces devices into architectural spaces reorganizes architectural choreography, and some of them play the role of Elements of architecture. But even in these situations, the Choreographic Objects have a superlative character, as they emphasize the characteristics of the Elements of architecture. Usually, they propose a choreography concerning space flows. When submitting shallow ceiling heights (Fig. 1, right), distortions, or when enabling new movements, also offer the participant interactions. This operation, in particular, allows highlighting some characteristics of the Elements of architecture.

3.1. Forsythe's *City of Abstracts*

In *City of Abstracts*[5] series, insertions of projections are made in public spaces, filmed in real-time, in the same places where they are inserted. The entire system of images and projections works as a Choreographic Object and consists of proposing a duplication of the environment's depth through the image projection of people's movement in the same places where the system is installed: "*As participants approach the video screen wall, their images are captured and processed by an algorithm, then fed back at a delay, inviting interaction as their bodies morph into a sequence of ectoplasmic forms*." (NERI, 2018.p.63). The surprise effect resembles a mirror, but in assemblies where the image is captured from a dislocated point of view concerning the usual participant's perspective, this device becomes more elaborated and establishes a new and unusual vanishing point. In short, it is a reflection that adds, to the architecture, supplementary points of view.

In the *City of Abstracts* montage made for *Pinakothek der Moderne* (Munich, 2006) (Fig.2), the projection is shifted to about two meters above the ground level (Fig. 2, right. number 2), aligned at the edge of a wall. It is not by chance that corners, borders, and subtle alignments of architecture are used as limits of the image. This strategy makes that the projection pierce architectural plane, canceling, to a certain extent, the wall existed previously. In this case, Forsythe modifies the depth of the environment and reinstates the architectural composition. Supplementation occurs by including a virtual opening, a window whose transparency is not literal, but similar a mirror's duplication. As a virtual hole in the surface

of the pre-existing wall, the projection proposes a new cut line for this wall and, due to its mirroring, a confrontation or interaction of the participant with the architecture. Space changes in its initial qualities, overcoming its rigidity when it becomes a proponent of an event. It is an architectural operation established by immaterial means.

In addition to the distortion proposed as a projected image's effect, when installing the camera (Fig. 2, right. number 3) that captures the projected images slightly tilted in relation to a ladder, this plane or virtual clipping proposes a distorted vanishing point in relation to the space in which it is inserted. The images have a slight delay, what suggests something like a *mise en abyme*, always updating the recent past: neither window nor mirror, but projection (Fig.2, right. number 4). Differently in the landscape in relation to which "I place myself", what is seen is not beyond, but is behind, in an irregular view outside a legible geometric scheme.

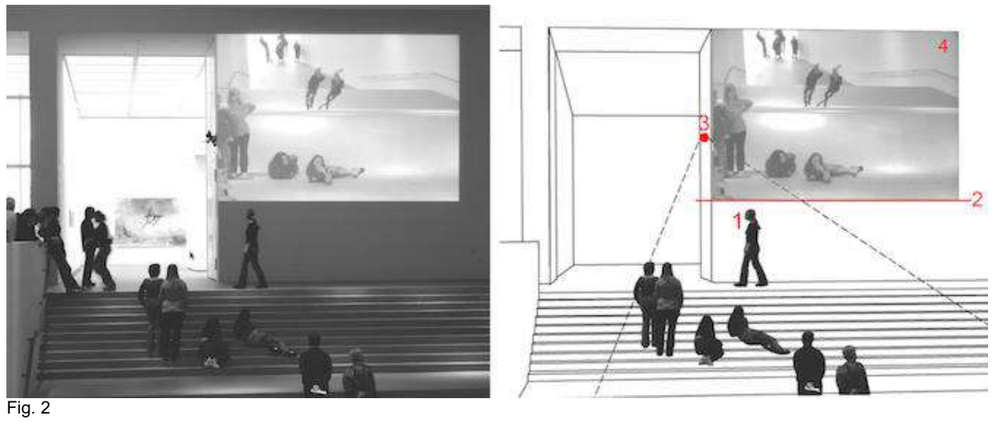


Fig. 2

4. Niemeyer's *Casino of Lake Pampulha*

Oscar Niemeyer's project for the *Casino of Lake Pampulha* (Belo Horizonte, 1944) opens up several possibilities for analysis, allowing new games based on references that overlap with the original project. First of all, the temporal distance imposed when we look at the *Casino* project today, allows us to see the political and historical context of the 1940s under a romantic and glamorized interpretation. This perspective is related to constructing of Brazil's identity as a country, reinforced by the construction of a casino in this context. Second, the project's regular structure receives artifices allowed by the casino program that erodes this structure and opens up the notation possibilities discussed below.

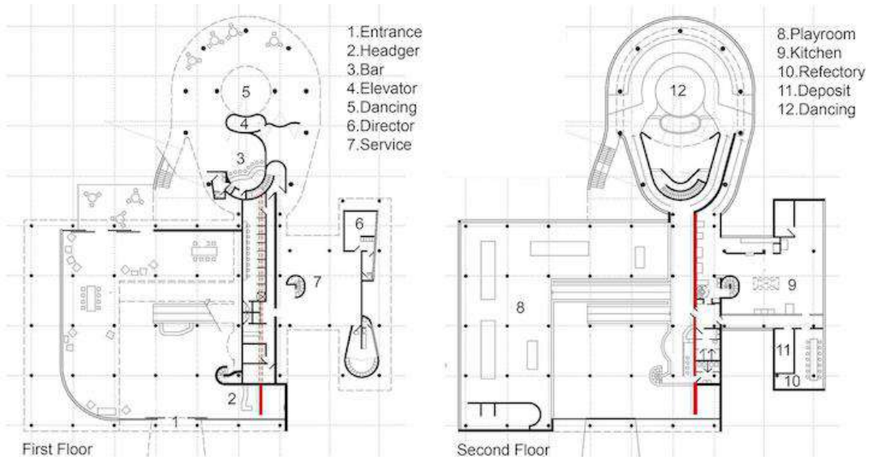


Fig. 3

The *Casino* project has three interpenetrating volumes: a square main hall, a linear and elongated prism with services, a pear-shaped drum with a track/space for shows, and a restaurant. By separating the functions in three prisms, Niemeyer delimits the main hall only for the big arrival at the Casino and for

the games themselves, locating them in the mezzanine. Access to the main hall is centralized in relation to the mezzanine void, with access to the mezzanine through ramps perpendicular to the main access. By placing a wall lined with mirrors on the right (Fig.3, in red), Niemeyer transfigures the composition's initial geometry. The apparent simplicity, then, reinforces Niemeyer's sophisticated strategy of solving the program through a system of movements arranged with the placement of ramps in the center of the main hall immersed in a game of reflexes.

4.1. Niemeyer's Casino and the mirror wall

Yves Bruand, commenting on the *Casino of Lake Pampulha*, praises the solution of the volumes, emphasizing the *"skill with which the transition was made"* (BRUAND, 1981, p.111) between them, as well as the balance between full and void that would result in a *"composition marked entirely by balance"* (Ibidem). Regarding the internal space, Bruand has a very different opinion:

> The interior is less well resolved, despite space research; the set of ramps and cantilevered balconies does not produce the desired result, as they are diluted in the profusion of colored coverings. Supposedly luxurious, the marble on the stair rail is acceptable, but the chrome steel of the columns is inappropriate and the pink mirrors that line the walls are unfortunate. In this case, Niemeyer could not free himself from the bad taste that guided the ornamentation of the great casinos of the 19th century; it limited itself to giving it a modern version. (Ibidem).

Niemeyer's project contemplates the choice - deliberated - of a collection of certain coatings related to each other; regarding this, there is no doubt. What is not clear and could have in its defense a notation other than the conventional one is that the choice of these coverings, and not others, is an explicit reference to 19th-century casinos' ornamentation. This coating gives the building's movement system a more sophisticated character that may not have been perceived by Bruand, as the above-transcribed comment indicates. Duh, Niemeyer adds, to the mirror wall's illusory depth, the polished surface of the columns that mark the modulation's regularity. The columns' surface reflections are added to the mirror walls reflex in a game of continuous replication.

In turn, the mirrors fragment the surface in a *trompe l'oeil* that shatters at the seams of the mirror panels that gently distort the image. This strategy implies that the reflexes and duplications constitute a kind of environment where the ramp is immersed. The wall of mirrors is responsible, first of all, for the illusory duplication of the main hall. From this point of view, what could be seen as mere decorative here assumes the task of duplicating the main hall plan, making the modernist plan of harmonic symmetry becomes a classical (or geometrical) plan symmetry similar to the 19th-century casinos(Fig.4).
It is then possible to admit a floor plan that has been not just duplicated, but blurred or distorted by the mirror set that takes place between the reflective surface of the wall (covered with mirrors) and the reflective surface of the polished steel columns.

There is no monotony since the double ramp that leads to the mezzanine and the restaurant induce a choreography that throws the observer into a situation of evidence. At the same time, they induce the individual to see the architecture in an ascending walk. At the first part of the ramp, the observer goes towards the wall of mirrors that line the entire large wall to the right of the main entrance. What could be opacity turns into illusory depth, reflection, and duplication. By completely covering the wall, Niemeyer makes the wall aesthetically ambiguous. The first function of the wall, separate inside and outside, is dubiously fulfilled, in this case, by a mirrored wall. The illustration seen in Figure 4 (left) allows you to counter, in a flat figure, the depth experienced during the movement undertaken in the *Casino's* main hall. The drawing takes on an unconventional notational character functioning as an argument for a new interpretation of the project and the building.

Thus, it is possible to say that the space in the *Casino of Lake Pampulha's* main hall is configured by a set of relations established between the ramp system and the reflections and duplications of the mirror wall and the reflective surface of the columns. The architecture is defined by the relations established by all the coatings that cover Elements of architecture. In this case, they are devices that work by expanding the choreographic possibilities of the building. Only during the movement does the project become complete, and it is possible to organize the composition given the multiple perspectives, elevations, voids, and, especially, the duplications that are part of the composition. This strategy assembles the choreography of the space, directing movements and expanding the main hall. Space before the mirror is blurred beyond the mirror. The distances are doubled on the reflective surface that proposes multiple images.

This arrangement, supported by a system composed of elements of architecture and composition, is, albeit with its traditional references, self-sufficient.
Mirrors and reflective surfaces do not only refer to the classic casino lining but function as an amalgamation of the composition - when diluted, as mentioned by Bruand. In the same way, the ramp is not only a modern element as a mere *collage* but assumes its vocation as a device that allows

visualizations accompanied by an initially upward and rhythmic directed movement. These characteristics give the coatings used in the composition, in association with the ramp, choreographic features that emancipate them from a purely decorative category. More complex than it seems at first, the mirrored wall, the columns, and the ramp are, together, a system of Choreographic Objects, without which the project would be different, very diverse, and impoverished.

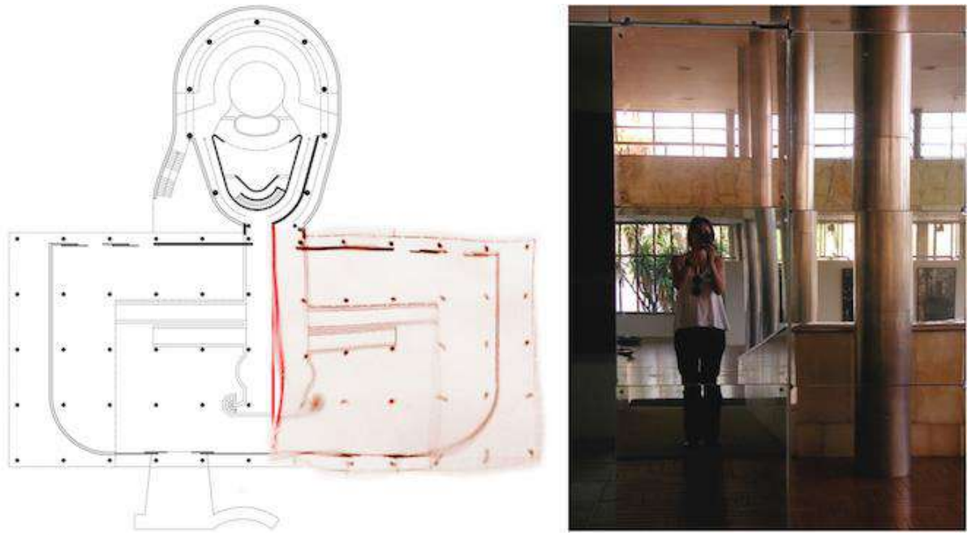


Fig. 4

5. Niemeyer's *Casino* and Forsythe's *City of Abstracts*

In *Des espaces autres, Hétérotopies*, Foucault opposes utopian spaces[6] to heterotopic spaces. Utopics as unreal spaces and heterotopics as spaces where all other determined cultural spaces are simultaneously represented, contested and inverted. The interface between these two images proposed by Foucault would be the mirror: a mixed experience, a coalescing surface between two depths. In the choreography installed in the *Casino of Lake Pampulha's* main hall, the most incisive point, where all the choreography is reorganized, is the arrival at the mirror from the first part of the ramp. We find ourselves both up and down the ramp at this specific point, facing the mirror: a moment of reordering the look, which is captured by our image:

> The mirror, above all, is a utopia, as it is a place with no place. Inside the mirror, I see myself there where I am not, inside an unreal space that opens virtually behind the surface (...) — mirror utopia. But it is also a heterotopy, to the extent that the mirror really exists, and that it has, on the place that I occupy, a type of effect in return (...). The mirror works like a heterotopia in the sense that it makes this place that I occupy, the moment I look at myself inside the glass suddenly completely real, in connection with all the surrounding space, and absolutely unreal because it is obliged, to be perceived, to go through this virtual point that is beyond.[7] (FOUCAULT, 1981).

In the course that takes place at the *Casino*, there is alterity between architecture and the observer himself as protagonists. This negotiation takes place quickly, but incisively, which allows for exchanges of roles along this same course.

What Foucault calls a heterotopic place also allows us to transpose it into the *Casino* project. For Foucault, heterotopic places would be places that somehow mark a position above, highlighted, or even overlapped, as a suspended and very defined layer in society. Examples are cemeteries, museums, prisons, societies like Shakers, and Jesuit missions. Anyway, they are almost neutral spaces, places where other laws stand out. A casino is nothing more than a place where gambling is allowed, and the laws of luck are accepted. At the interface between this universe to which the visitor belongs for a period and the duplicated space on the mirror's surface, there is a quick moment when it is possible to reposition oneself in front of the surrounding space and oneself.



Fig. 5

Simultaneous projection in the *City of Abstracts* operates in the same way, as a mixed experience, a coalescing surface between two depths. Installed in the *Pinakothek der Moderne*, the possibility of subjective reorganization is updated due to the small delay proposed by the artistic device.

However, I would like to highlight some crucial points of spatial organization in its material aspects. The duplication operated by a technological device in the Forsythe's installation is the duplication operated by the coating of mirrors in Niemeyer's work. The explicit distortion due to the camera's position in the *City of Abstracts* is the distortion operated by the mirror's fractionation in the *Casino*. Finally, the play of reflections between the architectural elements of the *Casino* and the double image seen in its many surfaces operates a certain delay, as it happens in the *City of Abstracts'* device. When approaching the projection of *City of Abstracts* and the reflective surfaces of the *Casino at Lake Pampulha*, it is evident that there is a complementary or extra perspective in both operations. By doubling the sense of perspective, the distortion is not only in the image but also in the spatial arrangement that gives the participant a feeling of vertigo.

6. Conclusion

The alterity between architecture and the observer itself as protagonists operated through the *Casino's* mirrored surface is exacerbated in *City of Abstracts* installed in *Pinakothek der Moderne*. What seems playful in the virtual mirror established by the projection in *City of Abstracts* expands the understanding of Niemeyer's operation. The transforming mirrors of Niemeyer's architecture were mistakenly reduced to decorative in Bruand's commentary. So, understanding Forsythe's operation through a projection allows the Casino's mirrored wall to be critically enlarged.

The ambiguous role of glass walls, mirrored surfaces, and projections is what will unite, in the case analyzed, the Choreographic Objects and the Elements of architecture. In this sense, bringing together works that contain similar operations promotes clarification of aspects of the project that can be highlighted. The purpose of this analysis was to point out founding operations that go beyond the merely formal aspects that bring them together. By bringing together terms already clarified in their fields of origin, which have common operations, hidden aspects of the practice are revealed, which is essential for new possibilities of understanding the studied work and, consequently, its criticism.

Notes

1 *A choreographic object is not a substitute for the body, but rather an alternative site for the understanding of potential instigation and organization of action to reside.* (FORSYTHE, 2011, p. 92).

2 *Elements of architecture are material things; they have a perceptual image preceding the existence of any their realization. In classical times they could be found in the treatises of architecture published after 1500. In modern architecture, elements are real things: standard windows and doors, bathroom fixtures you can buy. (...) Elements of composition are nearer to concepts than to things. They comprise rooms of certain proportion and dimension bearing names that refer to their use. In the beginning they are always far from the objective reality of elements of architecture. Elements of composition do not have a "natural" use; they are only pieces of virtual space ready to receive a label that will assign them a "function". That function may change later.* (MARTÍNEZ, 2003. p.99).

3 *Elements of composition are nearer to concepts than to things. They comprise rooms of a certain proportion and dimension bearing names that refer to their use. In the beginning, they are always far from the objective reality of elements of architecture. Elements of composition do not have a "natural" use; they are only pieces of virtual space ready to receive a label that will assign them a "function." That function may change later.* (Idem).

4 It seems good to remember the finery used in Oscar Schlemmer's *Triadisches Ballet* (1912-1922), that proposes some impossibilities to the dancers, or the same operation in Robert Rauschenberg's Performance Pelliccan (1963), or yet, the László Moholy-Nagy's Light *Space Modulator* (1922-1930). (RECENA, 2017, 2013).

5 This series has several assemblies (thirty so far), including Central Station (Zurich-2005), Postdamer Platz (Berlin-2006), Tate Modern (London-2009), SESC Pompéia (São Paulo-2019).

6 *Il y a d'abord les utopies. Les utopies, ce sont les emplacements sans lieu réel. Ce sont les emplacements qui entretiennent avec l'espace réel de la société un rapport général d'analogie directe ou inversée. C'est la société elle-même perfectionnée ou c'est l'envers de a société, mais, de toute façon, ces utopies sont des espaces qui sont fondamentalement essentiellement irréels. Il y a également, et ceci probablement dans toute culture, dans toute civilisation, des lieux réels, des lieux effectifs, des lieux qui ont dessinés dans l'institution même de la société, et qui sont des sortes de contre-emplacements, sortes d'utopies effectivement réalisées dans lesquelles les emplacements réels, tous les autres emplacements réels que l'on peut trouver à l'intérieur de la culture sont à la fois représentés, contestés et inversés, des sortes de lieux qui sont hors de tous les lieux, bien que pourtant ils soient effectivement localisables. Ces lieux, parce qu'ils sont absolument autres que tous les emplacements qu'ils reflètent et dont ils parlent, je les appellerai, par opposition aux utopies, les hétérotopies ; et je crois qu'entre les utopies et ces emplacements absolument autres, ces hétérotopies, il y aurait sans doute une sorte d'expérience mixte, mitoyenne, qui serait le miroir.*(FOUCAULT, 1967).

7 *Le miroir, après tout, c'est une utopie, puisque c'est un lieu sans lieu. Dans le miroir, je me vois là où je ne suis pas, dans un espace irréel qui s'ouvre virtuellement derrière la surface, je suis là-bas, là où je ne suis pas, une sorte d'ombre qui me donne à moi-même ma propre visibilité, qui me permet de me regarder là où je suis absent - utopie du miroir. Mais c'est également une hétérotopie, dans la mesure où le miroir existe réellement, et où il a, sur la place que j'occupe, une sorte d'effet en retour ; c'est à partir du miroir que je me découvre absent à la place où je suis puisque je me vois là-bas. À partir de ce regard qui en quelque sorte se porte sur moi, du fond de cet espace virtuel qui est de l'autre côté de la glace, je reviens vers moi et je recommence à porter mes yeux vers moi-même et à me reconstituer là où je suis; le miroir fonctionne comme une hétérotopie en ce sens qu'il rend cette place que j'occupe au moment où je me regarde dans la glace, à la fois absolument réelle, en liaison avec tout l'espace qui l'entoure, et absolument irréelle, puisqu'elle est obligée, pour être perçue, de passer par ce point virtuel qui est là-bas.* (Ibidem).

Image Captions

Fig. 1. Left. Casino of Lake Pampulha, Niemeyer. Belo Horizonte, 1944. Photo by the author. Right. A Volume within which it is not Possible for Certain Classes of Action to Arise, William Forsythe. Frankfurt, MMK Museum für Moderne Kunst, 2015

Fig. 2. Left. City of Abstracts, William Forsythe. Munich, Pinakothek der Moderne, 2006. Right. Diagram by the author..

Fig. 3. Plans, Casino of Lake Pampulha. Drawing by the author.

Fig. 4. Left. Notational diagram of Casino of the Lake Pampulha. By the author. Right. Casino of Lake Pampulha, Niemeyer. Belo Horizonte, 1944. Photo by the author.

Fig. 5. Casino of Lake Pampulha, Niemeyer. Belo Horizonte, 1944. Photos by the author.

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Biography
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Piranesi and the dual structure of his *Parere su l`architettura*
A memorable dialogue to the critical history of architecture

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Abstract

During the Enlightenment Century, the Venetian architect, archaeologist and engraver Giovanni Battista Piranesi (1720-1778) published in Rome the essay *Parere su l`architettura* (1765) which was elaborated in a context of debates between the defenders of the Greek's arts and the defenders of the Romans` arts.

However, the themes addressed in the *Parere* transcend this dispute. It was written in a form of a dialogue between two fictional characters that represented opposite tendencies: Protopiro - a "rigorist" - and Didascalo - "a friend of Piranesi" who argues for the inventive freedom of the artist. With this dialectical confrontation, Piranesi explains his views about the architectural discipline pairing these issues: 1. the ornament and its relationship with architecture; 2. the pertinence (or not) in establishing norms for architecture - according to the "rigorists"- opposing the freedom in variation - which Piranesi was adept.

Dialectically handle with these themes, Piranesi addressed some contemporary scholars whose theories sought to establish a new aesthetic key for architecture. This article aims to analyse some of the interlocutions that can be understood from the dialectic established in the *Parere su l`architettura* with the ideas of Carlo Lodoli (1690-1771) with whom Piranesi had contact in his formative years in Venice; Marc-Antoine Laugier (1713-1769) through *Essai sur l`architecture* (1753), a publication that circulated in the middle of the French Academy in Rome, with which Piranesi maintained investigative ties; and with Johann Joachim Winckelmann (1717-1768) who had settled in Rome in 1756 and started to seek the ideal beauty paradigm from Ancient Greece.

In this way, we conclude about the relevance of this essay to the critical history of architecture in a context that the late Baroque was contested and the Neoclassicism would be established. And we can contribute to the international celebrations on the three hundred years of Piranesi´s birth.

Keywords: Piranesi, inventiveness, ancient ruins, theory of architecture, Enlightenment Century.

1. Introduction.

The ideas elaborated during the Enlightenment Century were permeated by debates. In architecture that was a duality between norms and freedom, nature and history, will and authority, science and art, relative and absolute, acquired and innate ideas, empiricism, and rationalism, caprice and rule, doubt, and faith. One of the most prominent interpreters of that moment was the architect, archaeologist, and engraver Giovanni Battista (Giambattista) Piranesi (1720-1778).

Piranesi was born in Mogliano (Veneto) on 4th October 1720 and started his education in Venice. In 1740 he moved to Rome as a draftsman at the diplomatic expedition of the new Venetian ambassador to Pope Benedetto XIV (1675-1758). Since his arrival in Rome, Giambattista has been interested in the ruins to trace back the original sources of knowledge of the classical world and started extensive studies on Roman Antiquities.

Between 1745 and 1755, Piranesi devoted himself to the study of the ruins of Rome and its surroundings. He excavated, drew plans and projections, checked the landscape context, carried out a documentary assessment, and debated with archaeologists and foreign travellers. It took years of preparation to implement a great work that was published in 1756: *Antichità Romane*. In this work, Piranesi consecrated himself as an artist, but, above all, as a scholar of architecture and ancient Roman history, which earned him international recognition by his nomination as an honorary member of the Society of Antiquaries of London in 1757.

Based on these studies and as a reaction to his contemporaries who extolled Greek architecture and art, Piranesi positioned himself in favour of the merits of Roman architecture putting it in debt to the Etruscans in his treatise *Della Magnificenza ed`Architettura d`Romani* (1761). The controversy about the origin of architecture and antiquity nourished Piranesi's work in the next years. This great book provoked reactions; in France, Pierre Jean Mariette (1694-1774) presented a letter in 1764 to the *Gazette littéraire de l'Europe*[1] contesting Piranesi's thesis and claiming that Roman architecture was not only derived from Greek but had also corrupted it with decorative excesses.

Piranesi articulated a response supporting the argument about Roman superiority compiled in three texts with engravings: *Osservazioni sopra la lettre de M. Mariette aux auteurs de La Gazette littéraire de l'Europe; Parere sul`architettura e Della introduzione e del progresso delle belle arti in Europa ne`tempi antichi* (1765). From this trilogy, the middle work - *Parere su l`architettura* [Opinions on architecture] - addressed themes that transcended the mere Greco-Roman dispute.

This essay was written in a form of a dialogue between two fictional characters that represented opposite tendencies: Protopiro - a “rigorist” - and Didascalo - “a friend of Piranesi” who argues for the inventive freedom of the artist. By a dialectical exchange between these two characters, Giambattista explains his views on the limits and objectives of the architectural discipline, summarizing the current debate in the 18th Century and clearly debating with the ideas of some of the most prominent contemporary intellectuals.

This article aims to analyse some of these interlocutions that can be understood from the dialectic established in the *Parere su l`architettura* with the ideas of Carlo Lodoli (1690-1771), Marc-Antoine Laugier (1713-1769), and Johann Joachim Winckelmann (1717-1768).

2. Interlocutors - a context.

Carlo Lodoli was a Franciscan, mathematician, and scholar of architecture that had settled in Venice at the Convent of *San Francesco della Vigna* where he maintained a private school. He would become one of the most prominent Italian architectural theorists in the 18th Century; however, he did not publish anything by himself throughout his life. His ideas became known through publications from two of his most cosmopolitan disciples: Francesco Algarotti (1712-1764) - *Saggio sopra l`Architettura* (1756); and Andrea Memmo (1729-1793) - *Elementi dell`architettura Lodoliana* (1786).

Algarotti just mentioned in a note of his work that the new philosophical position on architecture was a legacy of Lodoli who was presented as a “rigorist” - strictly related to the rules. Memmo's work would become the most reliable source of Lodoli's writings. The first edition was published more than twenty years after Lodoli's death and aims to create a literary myth by reconstructing the work of the Franciscans. In the second volume of his *Elementi d`Architettura Lodoliana* (1833), two manuscripts from Lodoli for an architectural treatise were inserted, from which it is possible to reconstruct his thoughts more precisely.

Memmo mentions that Piranesi sent to the Franciscan a copy of his *Della Magnificenza* in 1761; but, probably, Piranesi had established connections with Lodoli before, during the formative years of Giambattista in Venice through the social circle of his uncle Matteo Luchesi (1705-1776).

Some of the ideas from the Italian Franciscan were associated with the Jesuit priest Marc Antoine Laugier. This French scholar anonymously published *“L´essai sur l`architecture”* in 1753 and the *Observations sur l`architecture* (1765). *L´essai sur l`architecture* was published in a pocket format and had a great repercussion across Europe. In France this book was read greedily; in England and Germany, it was translated in less than two years. In response to some criticisms, *Essai sur l`architecture* had a second edition in 1755 signed by Laugier. This version was expanded with a glossary, additions of text in the beginning and end, and some illustrations. The frontispiece engrave[2] presents the muse of architecture that points to “the little primitive hut” - *la petite cabane rustique* - (Laugier, 1755, p. 9), the origin of architecture that underlies Laugier`s theory. He settled the problem of architecture investigating the origins from an ethical way, similar to Jean-Jacques Rousseau (1712-1778) that considered a pure primeval condition of the man.

The impact of Laugier's ideas was inevitable in the circle of the French Academy in Rome, of which Piranesi had acquaintances[3]. Although he never mentioned the French priest in his publications, it is clear that Giambattista interacted with Laugier in *Della Magnificenza* and *Parere*.

As part of these researches on the origins of arts and architecture, the German scholar Winckelmann played a decisive role. Upon his arrival in Rome in 1756, he became very influential in the circle linked to antiquities. From 1759 he was in charge of organizing and cataloguing the material of the collector of antiquities, dealer, and art patron Cardinal Alessandro Albany (1692-1779).

Winckelmann's fruitful theoretical production began before he arrived in Rome. The essay *Gedanken über die Nachhmung der griechischen Werke in der Mahlerey und Bildhauer-Kunst*[4] (1755) was published as soon as he left Dresden and represented the greatest turning point for the Greek`s art recovery in Europe. Years later his ideas were re-elaborated in a more ambitious work, *Geshichte der Kunst des Alterthums*[5] (1764). This book had offered a new system of stylistic analyses basing the art development on climatic, natural, and social factors in each different culture.

In the publications *Ammerkungenüber die Baukunst der alten Tempel zu Grigenti in Sicilien*[6] (1759) and *Ammerkungenüber die Baukunst der alten*[7] (1762) Winckelmann emphasized his appreciation of the Greeks by mentioning their architecture through their Doric temples of Agrigento and Pestum, both in Italian territory and derived from the ancient *Magna Graecia*.

Although there were no mutual citations between Piranesi and Winckelmann, they knew each other personally, since they shared the same Cardinal Albani`s social circle. *Villa Albani* was constructed between 1747 and 1763 to house archaeological finds in the excavations of Rome and surroundings. The *Villa* received visitors with diverse interests, among them Piranesi who has dedicated one of his engravings to represent its gardens[8].

The rivalry between Winckelmann and Piranesi must have become even more intense when the German assumed the prestigious position of *Commissario alle Antichità e Belle Arti di Roma* in 1763. This official post was craved by Piranesi, but he would never have the opportunity to exercise it.

3. Opinions on architecture - a dialectical approach.

3.1. Rules and liberty.

In the *Parere su l`architettura*, Giambattista summarized the current debate in the Enlightenment Century by explaining his views on the limits and objectives of architectural discipline with a dialectical exchange between two characters: Didascalo (“a friend of Piranesi”) and Protopiro (a “rigorist”).

Protopiro was conceived by Piranesi as a representation of an intellectual group that has different artistic concepts, but this group was not homogeneous and the ideas have many nuances.

A crucial theme that emerges from the dialogue between Protopiro and Didascalo is the pertinence (or not) in establishing rules for architecture. Through his character Didascalo, Piranesi intended to criticize the rigorists represented by Protopiro: “You [rigorists] would have us live in huts such as those some say the Greeks took as the source for their architectural ornament.” And further: “You [Protopiro] are the sophist, you who impose on architecture rules that it has never possessed.” (Piranesi, 1765 en: Panza, 1993, p. 252).

Thus, Piranesi led his dialogue by decomposing the architectural elements (columns, architraves, triglyphs, friezes, cornices, vaults, and walls). He claimed that nothing is plausible to justify the presence of these elements: their correspondence with the truth of nature or with their functionality. By the exponentiation of the rigorists arguments about the superficiality of the ornaments, Piranesi concluded in a radical and provocative way that all other architectural elements could also be removed: “Choose, Signor Protopiro, Which will you demolish? The walls or the pilasters? No answer? Then I [Didascalo] will demolish the whole lot. Take note: buildings with no walls, no columns, no pilasters, no friezes, no cornices, no vaults, no roofs. A clean sweep […]” (Piranesi, 1765 en: Panza, 1993, p. 254)

These ideas were clearly establishing a dialectical exchange with Laugier, who had settled his “primitive hut” as an archetype that was, simultaneously, principle, rule, and perfection based primarily on Reason. For him, rational control is a characteristic of the human being's condition and a moral requirement.

By that time, the image of an original hut had been recurrent in the theory of architecture since Vitruvius[9]. The architecture theorists had some hypothesis that architecture had originated from a primary shelter. And after, improving this formula the Humankind had invented a wooden version of the Doric order which was copied in stone - the other orders were consequences of this process.

But we can consider that until the Enlightenment Century, no one had carefully thought about the primitive hut. Laugier did just that and had formulated a new concept of functionalism. In Laugier's work, for the first time since Renaissance, the principle of the authority of orders was discarded in the name of another functional and rational prototype: the hypothetical primitive hut which became a measurement standard of each architectural form and elements.
Thus, the French priest considered that these primordial architectural elements were natural, rational, and functional. He claimed that architects would employ the orders with the same sense of constructive truth that was present in these basic elements:
“I conclude then and say: in every order of architecture, there is only the column, the entablature, and the pediment that can essentially enter the composition. If each of these three parts is located in the situation and in a convenient way, there will be nothing to add to make the work perfect.” (Laugier, 1755, p. 11)
Regarding the number of orders, Laugier only admitted the existence of the three inventions from Greece - doric, ionic, and corinthian. For him, the tuscan and composite orders were only derivations created by the Romans. However, Laugier had no intention of abolishing the system of orders. On contrary, he believed that new orders could be invented as long as they followed the fundamental principles established by the primordial hut; so, he proposed the creation of a “French order”.
Considering these topics, Piranesi highlighted in his dialogue *Parere su l`architettura* the fact that there is no way to extract a clear set of rules that configure the consolidated classification of the five architectural orders - doric, ionic and corinthian (Greek origin); tuscan and composite (Roman origin)[10]. With his extensive field experience and direct contact with the ruins, Piranesi (by his character Didascalo) concluded that:
“One refuses to see that an order, whatever it may be, whether tuscan or doric or ionic or corinthian or composite, for all the diversity of dimensions and ornaments, is in appearance no different from another order. One refuses to see that we cultivate only one order or rather only one manner of architecture.” (Piranesi, 1765 en: Panza, 1993, p. 257)
Piranesi developed this idea by mentioning James Adams' project for the British Bank in which it was predicted a “British order”. Giambattista defended the possibility of creating a new order considering that: "[...] these proportions may well be invented: then a new order can be found" (Piranesi, 1765 en: Panza, 1993, p. 259).
The general concept of Piranesi is that: the freedom to vary, the freedom to execute, the free field to act are prerogatives of the building art. These assertions evidence the distance between Piranesi and the Italian intellectual Carlo Lodoli who was based on the conviction that architecture is a science, which is the premise of his entire theoretical construction (Consoli, 2006). For Giambattista, instead, architecture is an art, a concept that interpose the posture of the rigorists.
This Piranesi`s idea of following the artist's subjectivity is strictly against Laugier`s theory which considered that the architect's genius has a field to manifest itself through the liberty of composing the essential elements. The method to achieve this goal without incurring transgressions is based once on the primitive hut, which guarantees the accuracy of the execution, the logical rigor in the procedure, and the beauty in the final success. For him, the primordial architectural elements derived from the primitive hut dispense additions that are merely placed by caprice: “It is in the essential parts that all the beauties consist. In the parts introduced by necessity consist all licenses. The parts added on caprice consist all the defects [...]” (Laugier, 1755, p. 10).
Winckelmann also has restrictions about the idea of working by caprice. For the German, the artist's expressiveness would occur through imitation of the ancient Greeks who had achieved the complete beauty extracted from nature. He considered that the artist's freedom lies on the beauty`s transcendence that could be expressed by the Greek`s “noble simplicity”[11] (Winckelmann, 1755, p.331-332). This would be the only way for contemporaries to become great and inimitable:
“I believe that the imitation of those models could teach the way to become more readily master since with this imitation one finds all that is scattered in the whole nature summed up, […]. That imitation will teach us to think and imagine with confidence since it shows in those models the extreme boundary of the human and divine beauty.” (Winckelmann, 1755, p. 323-324)
This vision of Winckelmann is quite different from Piranesi, for whom the entire argument presented in his *Parere su l`architettura* is mediated by the architect's idea of “liberty” to express the artistical individual talent: “take away every man's freedom to decorate as he sees fit, and you will very soon see the architectural sanctuary open to all and sundry. When everyone knows how to practice architecture, everyone will despise it.” (Piranesi, 1765 en: Panza, 1993, p. 261). These assertions reveal that Giambattista defended that the artistic sphere is linked to a subjective activity that could be manifest by compositional variations.

3.2. Ornaments and the architectonical truth.
With these considerations about the ways that an artist has to expose his inventiveness, it is possible to verify another theme that emerges with emphasis on the *Parere su l`architettura*: the ornament.
In the dialogue, the rigorist Protopiro, in a critical stance on ornamentation, recalls Montesquieu's (1689-1755) axiom in which he compared written and constructed arts: “A building laden with ornament is an enigma to the eyes, as a confusing poem is an enigma to the mind” (Piranesi, 1765 en: Panza, 1993, p. 249). Didascalo (the Piranesi`s representative) replies that the ornament is part of architecture as long as it is restrained, has a strict relationship with the function, reconciling the parts of the whole.
The ornament had already been addressed by Piranesi in *Della Magnificenza* (1761) and in the *Osservazioni* (1765). According to him, the moderate and thoughtful ornamentation based on the architectural framework adds qualitative values and highlights the beauty of the ensemble. What is deformed cannot become beautiful with ornaments, and what is beautiful requires only the necessary ornaments to not appear careless. In these two works, Giambattista used the theme of ornament (and its commensuration) to structure a narrative whose aim was to exalt the merits of Roman architecture at the expense of Greek architecture. Piranesi presented that the Greek diversification would have contaminated Rome, whose artistic roots were in the Etruscans.
This approach has some similarities with Carlo Lodoli that also considered the ornament as an integral part of the architectural organism regarding the truth of the materials and that the ornament should be eliminated when it is false and arbitrary. Thus, Lodoli defended the idea that new ornaments could be invented as long as they are based on the properties of the materials. He rejected the idea that stone can represent wood which probably had influenced the Piranesi criticism in *Della Magnificenza* about the evolution of the “primitive hut” from wood to the first stone temples.
In this complex discussion about ornaments, Laugier, by his way, considered that the beauty of buildings depends on three factors: the exactness of the proportions, the elegance of the shapes, and the right choice and arrangement of the ornaments. The convenient use of ornaments would be related to the decorum (*“bienséance”*) and each kind of building (public or private) requires a kind of decorum that is according to each building`s function. So, the decoration wouldn`t be capricious and arbitrary.
Winckelmann, in his writings on architecture, differentiated the essential and the adornment (or ornament): “The essential comprises partially the materials and partially the way of constructing and in part the shape of the building and its necessary components” (Winckelmann, 1762, p. 43). For him, the excess of props led to mediocrity in architecture. Thus, the German established the simplicity of the arts as a formal virtue. The adornment (or ornament) should not have an arbitrary application and is part of the most essential of architecture:
“when the adornment is applied with simplicity in architecture, then beauty arises: so, something is good and beautiful when it is what it should be. For this reason, the adornments of a building must be in accordance both with the general and the particular purposes of that building [...]” (Winckelmann, 1762, p. 176-177)
These approaches towards ornamentation from Laugier and Winckelmann are substantially different from those that Piranesi defends in *Parere su l`architettura.* By his character Didascalo, Giambattista highlighted that the ornament would be one of the resources that the artist has to express his inventor spirit.
The coherence of ornamentation is connected to the concept of the “truth” in arts and architecture in general. Right at the beginning of *Parere's* dialogue, both characters (Protopiro and Didascalo) claimed that they liked the “truth”.
For Didascalo the observation of the truth is linked to nature, which offers several plausible variations: “The decorations should be graded as things are in nature, some being more imposing and dignified than others. In such art, as in nature, the eyes will see not confusion but a beautiful and pleasing arrangement of things.” (Piranesi, 1765 en: Panza, 1993, p. 264). So, the variety offered by nature and the ancient ruins constituted a fundamental repertoire for the exercise of the artist's genius .
Lodoli, Laugier, and Winckelmann also invoked the concept of “truth”, but with different meanings to justify their respective theories. For Lodoli, the architectural truth indicates a strict correspondence between the built elements, their coherent function, and the correct appliance of materials. According to the Franciscan, the ornaments of the five known orders were false because they do not reveal the intrinsic truth of materials.
The notion that the stone elements imitated the wood leads to an assertion that it will be necessary to invent new architectural members (called *sostituzioni)* that could really express the materials used to build and the real purpose of these news elements. So, Lodoli intended to refund the architecture through new rules and invent new architectural members. He also considered the possibility of variations in the architectural elements. According to the descriptions of Memmo, these ideas of the Fraciscan have a connection with Piranesi`s work:

"Father Lodoli believed that one should not narrow the path for variations, always considering the real solidity. For similar reasons, he admitted all those elegant inventions of the Greeks and the Romans, which can be seen subsisting and engraved in many books, and, particularly, in that one entitled *Della Magnificenza"* (Memmo en: Consoli, 2006, p. 203)
Considering this same topic, Laugier stated that the origin and constructive logic of the "primitive hut" became the principle of all architecture, promoting a definitive image of the architectural truth: "the model from which all the magnificences of architecture were imagined." (Laugier, 1755, p. 9-10).
Winckelmann, by his way, recognized that Greeks have achieved an ideal concept of beauty because they have extracted the essential truth from nature; thus their art would be a model that represents a complete perfection to the artistic practice (Kruft, 2016).

4. Final Considerations.

The clash of ideas presented in the dialogue of *Parere su l`architettura* reveals, on the one hand ,the belief in formal severity and technical function (represented by the character Protopiro), which went back to the primitive origins of Human history as expressed by the French theorist Laugier and, more significantly, by the German scholar Winckelmann. In contrast to this rationalist point of view, the belief in inventiveness is based on diversity as a fundamental value (represented by the character Didascalo).
Through the dialectic established by his two characters, Piranesi sought to structure general aspects of his own theoretical argument: 1. the architects and designers of ancient Rome had absorbed and refined the ideas of other cultures; 2. the value of the artist's genius in the process of creating an architectural language.
Through reading the duality and dialectic expressed in the *Parere su l`architettura*, it is possible to verify that in the context in which this essay was produced, the controversy over the merits of Greece and Rome in the foundation of the arts began to shift from mere questions of antiquarian for other issues, inserted in a wider problematic about aesthetics.
Consequently, the architectural debate of the 18th Century has turned to meet an urgent demand: the search for a consciously modern design style. When we check the trajectory of G. B. Piranesi, it appears that his response to this context was not restricted to his writings. He proposed a new vocabulary of architectural elements, this new language could be extremely varied, although consistent with the logic of the building itself.
The invention of a new language did not, however, come from the intrinsic properties of the material (according to Lodoli's idea), but derived from the study of nature and, mainly, from the ancient ruins. This new architectural language must remain faithful to the logic between the parts and the whole, but Piranesi`s main idea was that the architect can, and indeed needs, to invent new forms.
In a context of transition between the late Baroque and the incipient Neoclassical, we can conclude that the Piranesi`s assertions disposed in this memorable dialogue between Protopiro and Didascalo became a reference for the critical history of architecture from the 20th Century. The challenges that preceded and caused this dialectical confrontation were the same that constituted the foundation of modern architecture and that has remained until nowadays: the relationship with the past, the role of the principles of nature, the architectural truth, the role of ornament, the artist's capacity and inventive liberty in the search for a new architectural language.

Notes

1 This letter was published in the *Gazette littéraire de l'Europe, Tome Troisieme - Comprenant les mois de septembre, octobre, novembre, 1764 - A Paris, de l`Imprimerie de la Gazette de France, aux Galeries du Louvre, no Supplément a la Gazette Littéraire de L`Europe*, Dimanche 4 *novembre*, 1764, p. 232-247 (available in: https://books.google.fr/books?id=lchMAAAAYAAJ&printsec=frontcover&hl=fr#v=onepage&q&f=false, accessed in 19 dez. 2019.
2 This famous engraving was executed by Charles-Dominique-Joseph Eisen (1720-1778).
3 Piranesi installed his studio strategically, in front of the French Academy situated on *Via del Corso* (Rome), an artery of the city where several cosmopolitan intellectuals passed.
4 We have consulted the italian version: Winckelmann, J. J. "Pensieri sulla imitazione della pittura e scultura dei greci", 1755 en: *Opere di G. G. Winckelmann, prima edizione italiana completa.* Prato: Per i Fratelli Giachetti, 1830-34, 12 vol., Tomo VI: 305-356.
5 We have consulted the italian version: Winckelmann, J. J. "Storia dell`arte presso gli antichi", 1764 en: *Op. cit.* , Tomo I: 3-349; Tomo II; Tomo III.
6 We have consulted the italian version: Winckelmann, J. J. "Osservazioni sul`architetura dell`antico tempio di Girgenti in Sicilia", 1759 en: *Op. cit.*, Tomo VI: 263-304.
7 We have consulted the italian version: Winckelmann, J. J. "Osservazioni sull`architettura degli Antichi", 1762 en: *Op. cit.*, Tomo VI: 13-259.
8 *Vedute di Roma : Veduta di Villa Albani*, catalog. 960 (Ficacci, 2016).
9 Vitrúvio - *De Architectura* (book II, ch. I), consulted here as: Maciel, Justino M. *Vitrúvio* - Tratado de Arquitetura. Lisboa: Ist Press, 2006.
10 Tese orders were disseminated from Renaissance specially through the treatises off Sebastiano Serlio (1475-1554) - *I Sette libri dell'architettura* (1537) - and Giacomo Barozzi Vignola (1507-1573) - *Regole delle cinque ordini d'architettura* (1562).
11 This axiom became an ideal of eternal beauty for Winckelmann and it was developed by his analyses of the sculptural ensemble Laocoonte.

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The Possibility of a Common Ground
/ critical reflections on the practice and interdisciplinarity

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Abstract

The present is characterized by a crisis of established socio-spatial and political order. Outdated categories and terms no longer function. Representational logic fails to grasp the complexity of contemporary phenomena. In this situation, it is necessary to unlearn established modes of referring to the world and rethink methods of constructing, situating, and criticizing reality. The dialectical differentiation between *criticism* and *practice* has become common. The place of criticism seems dissociated from practical areas as if it could not have a spatial manifestation.

For some time, social and interdisciplinary organizations –operating at the edge and in between disciplines, and in so doing, questioning how they usually work-, have been intervening in cities as active agents of transformation on various scales. Communities, territories, resources, methodologies, and actors, are committed to a public construction focused on the restructuring of rules, processes, and relations. Actions that combine art, politics, economy, and history, through architecture, have built alternative fields from new readings of the urban scene.

The most assertive way to analyze this emerging field is through the conceptual definition of *Critical Spatial Practices* (Rendell). This concept describes practices that transgress disciplinary boundaries, committing to the field of Social and Aesthetic, and Public and Private. Attention is not only given to the Critical but also the Spatial, indicating an interest in the exploration of the aspects in an interdisciplinary action research process.

This research trusts that these *Critical Practices* operating in public spheres are not a fad. On the contrary, it is confident that this trend will end up affecting disciplines and public policies. For this to happen, we need a deeper understanding of the contextual discussions to establish consistent and creative bases that can build new paradigms allowing the constitution of a radical movement as a public construction.

Keywords: Criticism, Spatial Practice, Expanded Fields.

1. Opening notes
Disciplinary and Systemic Check; The Possibility of a Resistance.

Democratic societies are facing a series of difficulties given poor preparation in facing current socio-political and environmental problems. Western democratic societies are seeing an explosion of new particularisms with unconventional identities that are calling into question the universalisms that seemed static (Mouffe, 2013). The apparent freedom of liberalism is being questioned. The collective ability to actively participate in political processes is beginning to forge new paths and develop intelligence previously characterized by an individualist consumerist domain. The dominant western hegemony is beginning to crack and wobble because of a crisis of political legitimacy that has thrown into question the concept of *progress* and the privileging of competition over collaboration. The abysmal concentration of economic and political power has generated a series of socio-spatial conflicts that have put democratic representation under scrutiny. Simultaneously, extremism, authoritarianism, and radicalism have become increasingly present. It is impossible to ignore what social mobilizations have been trying to demonstrate around the world. These social movements- such as those in Chile, Hong-Kong, Ecuador, Lebanon, France, Bolivia, and many others- have shown us their message quite clearly; we need a substantial transformation in the different practices within the socio-political model.

For a long time, we have seen our discipline subordinated to different spheres of power, the power of real estate being the most substantial of them. In the use of space, people are constantly being subordinated to the precepts of markets and of those who own many of these spaces, this due to the high promotion of land privatization and territorial speculation. As a consequence, space is designed to exert control over its users in a very subtle yet complex way. The notion of the city as space where citizen's rights are respected and acknowledged has been eroded and corrupted by the socio-political and economical experiment carried out over a vast amount of territory. Participation, as a way of confronting social issues and coping with its problematics, has been contaminated and undermined by its instrumentalization towards a superficial search for legitimization.

The discipline, training, and professional practice have been characterized by being aligned with the dominant powers, with a series of conventions and structures focused on perspectives that aim to solve problems rather than problematizing the contexts in which they operate. Thus, traditional practices have placed their emphasis on a material dimension over the development of intangible and critical contents. This analytical and de-ideologized simplification of our contexts has ended up generating a homogenization of creative processes characterized by the predefinition of work and production processes. Over-specialization within the discipline has ended up isolating it, relegating it to a field where the friction with society is practically non-existent, or at least, not binding. Architectural projects have become increasingly predictable, homogeneous, pretentious, and sitting too neatly with the context of fashionable trends. The fascination with the incorporation of new technologies in the production process in itself has generated a lack of criticality in their use. While the battle of egos and authorship continues, the discipline continues to be relegated to a diminished position of status quo. At least certain traditional disciplinary conventions reveal their obsolescence and the need for substantial transformation to retake a relevant position of agency within the force system inside our societies.

The complex living organism, in which the contemporary socio-spatial territory has been transformed, often imposes ideas on the impossibility of changing certain processes, systems, and *states of things*. Social displacement, planning and un-control, natural disasters, co-optation of criticality, undercover business agendas with cultural events, illicit associations between public and private sectors, gender inequalities, spatial segregation, the concentration of economic and political powers, and the prevailing market power over territorial development, are just a few of the problematics that we will continue facing during our practice. Analyzing and reflecting on these conflicts to promote collective debates that trigger alternative and representative proposals, is only the first stage to establishing new paradigms from our fields of practice that can change and re-signify the relationships and the spaces we inhabit.



Fig. 1

Our language and interdisciplinary behavior, theoretical and conceptual, are in full reinvention in consequence of interpretations that have emerged in response to scenarios of changes and crises -both local and global-. The basic postulations on how social relations, spatial distributions, public agenda issues, the expansion of disciplinary fields, the construction mechanisms of emerging systems, and the link between communities and territories in mutation, should be reviewed to understand how, when, and why they change and can be changed. This open discursive construction will continue to be redefined as we visualize and understand other variants and contradictions that are in play in the urban transformation within the social, institutional, political, and economic crisis context on a neoliberal scenario.

These days there is a diverse range of interdisciplinary groups, some professional and other amateurs, acting as new agents of change within cities, reshaping our contexts, and questioning the previous generation. Through trial and error, and with a critical and refreshing political stance, a series of collectives and practitioners have begun to define a new territory for action and territorial transformation. Even presenting a series of contradictions, this social body has become an opposition to the disciplinary status quo through experimental action, affectation and, involvement in various territories. With a strong political character of problematization of the contexts in which they operate, they could be considered as a *Disciplinary Resistance*. To advance in these guidelines is determinant to find a common language, mutual recognition, and, the channels to transfer the knowledge around these experiments and testing. The following research and critical reflection trust that this new social body can begin to set out some structural socio-spatial transformations, disputing the spaces of power through the development of new tools, methodologies, and positions to disrupt the neoliberal machinery.

2. Criticism as Practice, and Practice as Criticism;
At the Edges and in Between.

In this case, comparisons, confrontations, and binarisms will be put aside to delve into a complementary structure between two concepts. Although both concepts will be used to question each other and advance in new conceptual -and contextual- relationships with each other, the purpose of this exercise is rather to present them in a dialogue. Through a reflection on these concepts, and on the existing theoretical frame behind them, the purpose will be to expose the diverse learnings and possibilities that occur from the common union that rises from their combination. On the one hand, the *Critique*, which allows us to develop alternative readings of our reality and the power systems that affect it. On the other hand, the *Practice*, which allows us to operate on that reality by applying knowledge or experimenting with a theory. We could agree that generally the critical disciplinary processes are developed at a later stage than the practice of our discipline itself. Criticism turns towards the constructed or represented work, and towards the history and theory of architecture.

Furthermore, we could say that the occasions on which we see disciplinary criticisms focused on reflection on the purposes or possibilities that the same criticism could allow are scarce, even null. The modes and purposes of criticism in political and ethical terms, and why not also spatial, have remained in the background of the central discussion if they have ever been deeply discussed at all. Moreover, disciplinary practice, which, one could say, is ahead of criticism, has been subjugated under factual powers, becoming a representation of power rather than the exploration of that power which it must question to dismantle the systems of power to which we are subjected.

It seems that, even today, disciplinary criticism is still based on the judgment of disciplinary practice or the connection with a public opinion, that the discipline usually considers misinformed. This has not allowed criticism to open horizons, discover new contextual possibilities, and break with inertia or statics so deeply rooted in our discipline. But this equation changes when we understand that practice can transform itself into criticism, understanding its capacity for spatial manifestation and the power in the exploration of its positionality and subjectivity. It is at this moment that the opportunity for a disciplinary critique that is politically conscious, self-reflective, purposeful, and creative at the same time appear. Once criticism is recognized as a practice that is positioned in a specific context and vice versa, practice as criticism that is placed in a certain context, we can begin to question other distances, such as those existing with users, audiences, collaborators, or, whoever is experiencing or towards whom the *Critical Practice* is directed.

This leads us to think about the existing and necessary distances between the two concepts. Once positioned in a common ground where we understand that practice is a means of contextual criticism, therefore, as practitioners we must take a certain distance from the work itself, from its site, and the audience - or community, reader, etc.-. This leads us to question what those distances should be. As Hal Foster raises in *The Return of the Real*, concerning optical and tactile distance, we must be aware of the dangers of both de-identification and over-identification that can be generated with the object of study itself -the site, the context, the workpiece, the audience, etc.-. Although a certain distance is necessary, its explicit and clear manifestation is also necessary. It is essential to transmit the subjectivities of the position of a *Critical Spatial Practice*, otherwise, concealment is generated as a mask that does not allow a project to be fully understood. The questions around critical distance are inquiries that reveal intimacies with places, people, and workpieces, where the personal and autobiographical enters into the debate as an exploratory manifestation of a political subjectivity that is necessary to understand. It is precisely the *Critique* that allows the *Practice* to understand the position one occupies in a context, as well as the project itself and all the variants that are at stake. For this reason, it is essential to open the process of a *Critical Practice* not only in conceptual and material terms but also in ideological and affective ones, here is where peripheral margins can help to find spaces that allow these characteristics to be manifested more radically and sincerely.

For some time, it has been possible to see social organizations operating at the edge and in between disciplines -and in so doing, questioning how they usually work (Rendell, 2006)-. Usually self-managed, they have turned to intervene in cities as active agents of transformation at various scales. Communities, territories, resources, methodologies, and actors, are committed to a public construction in which work is focused on the restructuring of rules, processes, and relations. Actions that combine art, politics, economy, and history, through architecture, have built alternative fields and contexts from new readings of the urban scene.
Temporary performative interventions, reactivations of disused spaces with specific communities, events designed for the exchange of knowledge, participatory design methodologies, artifacts for social interaction and, temporal occupations for testing new methods for debate and dialogue, have been some of the work formats that these practitioners have been developing. Although these new approaches entail a refreshing attitude, risky and purposeful behavior, and a conviction that breaks with certain disciplinary discourse conventions, there is still a lack of understanding and a common language of this *new field of practice*. These types of practices, as reactions to changing times, have a series of essential characteristics that can change our contexts, and redirect the disciplinary behavior. This is why today it is necessary to trigger conceptual and critical discussions around the outputs and methods produced within this interdisciplinary research to fully acknowledge the wide opportunities to expand the spectrum of these possibilities (Rendell, 2010).

The most assertive way to describe and analyze this emerging field of action is through the conceptual definition of *Critical Spatial Practices*. This concept, first coined by Jane Rendell (*A place between Art, Architecture and Critical Theory*, 2003), describes specific practices that transgress disciplinary boundaries, committing to the field of Social and Aesthetic, and Public and Private. Not only particular attention is given to the Critical, but also the Spatial, indicating a special interest in the exploration of the specificities inside spatial aspects in an interdisciplinary action-research process. To the intersection between; Theory and Practice; Public and Private; and, Art and Architecture, one could

also add the Individual and Collective dialectic dimension. Taking into account certain conceptual prescriptions from Rendell, these practices have the main objective of questioning and transforming the socio-spatial conditions (Lefebvre, 1991) of a specific site to which research and intervention are turned. On the other hand, it seeks to test the limits and procedures of the disciplines themselves as a form of critical expansion. The specific research site is transformed into a *practiced place* (de Certeau, 1988) where a conscious investigation from the practitioner's position is carried out. The above, recognizing and understanding the subjective contingency of one's position in the world, to produce knowledge with greater degrees of objectivity and interference than if one intended to be a mere neutral observer (Haraway, 1988). The foregoing aims to recognize a series of specific conditions of the *Situation* of the *Site* to be intervened in, conditions produced in spatial and temporal terms, crossing material, social, political, economic, and historical dimensions and relationships (Coherty, 2002).

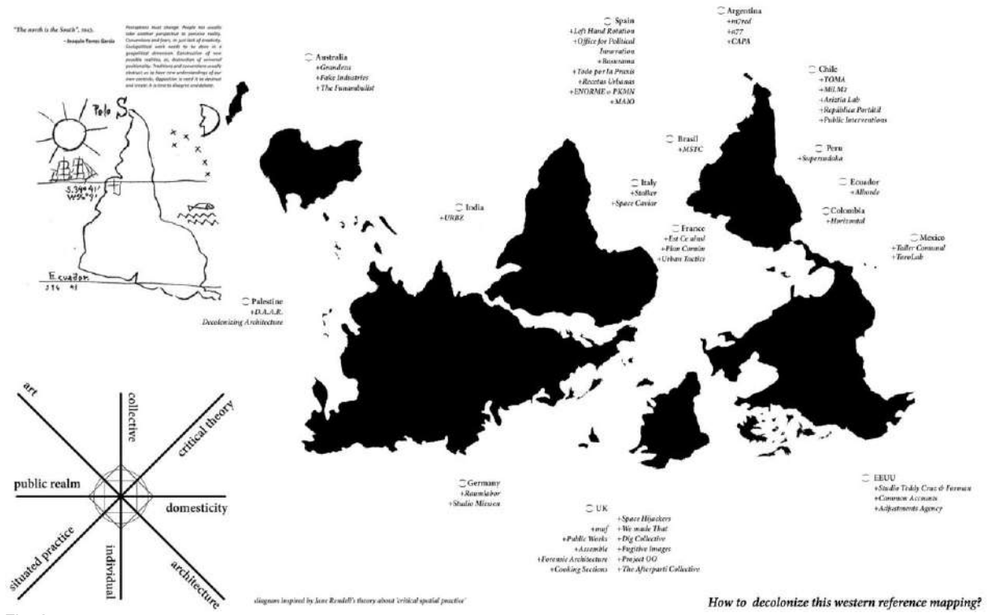


Fig. 2

These practices have embraced these complexities with new ideological positions that challenge their limitations in search of opportunities within contexts in crisis. Thus, through mechanisms of co-production, which go beyond mere material explorations, they are challenging and destabilizing hegemonic power structures in search of a balance in the distribution of influence through an alternative radical discourse. From the generation of links between *critical theory* and *practice*, new expressions characterize the practice as a subversive political operation in the post of the transformation of coexistence environments. The binding involvement of a participatory civic body has encouraged the development of new pedagogical tools focused on collective interaction, and therefore, on the renegotiation of rights and civic life. This is how they have finally begun to dilute disciplinary boundaries, working in hybrid spaces where the profession begins to re-establish and reinvent itself by adapting to changing circumstances in conflictive areas. Through this mediation and insertion into independent social structures, the discipline could begin to reconquer decisive spaces in terms of agency and visions of the future for the creation of new socio-spatial and political paradigms. The political arena, in addition to certain cultural and academic institutions, have quickly instrumentalized these alternative practices for legitimization purposes, a concern to take into consideration. It has not only been the traditional institutions that have used these new operating strategies but also some disciplinary instances - like biennials - have done a work of institutional validation of some of these practices, ending up isolating them from social reality in inbred contexts of self-thoughtful and self-indulgent reflection.


Fig. 3

3. Collectiveness above all;
Embracing the Antagonist and the fear of Conflict.

It is necessary to specify the importance that is given to the collective and horizontal work processes around these *Critical Practices* of socio-spatial character. It seems determinant the need to generate work processes of this nature to be able to tackle complex scenarios, conflicts that are associated with modern global urbanization processes in terms of the relationship between built environments and the social relationships that are developed in them. The change would be decisive if the actors and organizations involved in the transformation of our environments were constituted by heterogeneous groups with different backgrounds, experiences, perspectives, and positions. It seems that the only way to better understand the processes of change and to then carry out actions that take us to better scenarios is through the strength and joint intelligence of a diverse group of people who can develop horizontal working mechanisms. This is something that the academy and professional organizations still consistently lack today. During processes of change, certainties can never be taken for granted, testing radical ideas never give absolute security, one can never know how they will end up. It is simply a process of trial and error. Insecurities and discomforts become a common space far from a comfort zone. It is necessary to challenge contexts, embracing uncertainty, disrupting traditional processes -that we already know how they end-, challenge our limitations, put our ideologies ahead, learn from unexpected reactions, re-think the visions of the future, create conceptual subversion, and, use our practice as a critical and political operation.

In any case, one must keep in mind that modern society continues to produce individuals with a particular type of character that tends to give up on collective dimensions by not being able to handle a social commitment with high levels of demand and complexity. If citizens do not understand or see the benefits that collaborative mechanisms generate, they will likely turn back to scenarios that promote competitiveness, hardly allowing them to understand the consequences of their actions. The consumerist economic culture in which we are inserted tends to neutralize differences, given the great anxiety generated by facing the *other*. This foregoing has generated a decrease in the cooperative impulse with those radically different (Sennet, 2012). This point is one of the most transcendent to break into individualistic structures that do not give space to uncertainties or antagonistic contradictions. Authentic liberation, as a process of humanization, lies in the joint reflexive action of understanding the surrounding reality, with their existing heterogeneous differences, to transform it. For this, it is urgent to start testing new interaction protocols, new ways of decision making, and experimental organizational practices that allow reconciling differences to create common notions of reality. An ideology stemming from cooperation and collaboration should start with mutual recognition allowing the antagonistic presence, and therefore, the social frictions that it generates, to then build

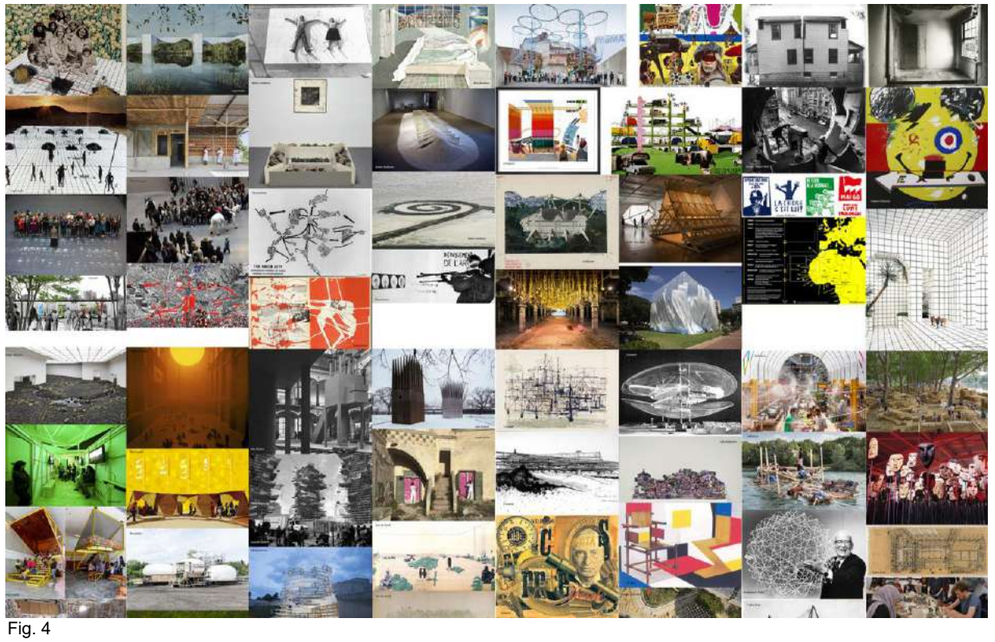
common objectives as a pluralistic political exercise. These new spaces of coexistence must value *the difference*, articulating the various individual positions in search of finding those similarities within the difference as a way of building *the common* from collective intentionality.

Perceptions must change. People do not usually take another perspective to perceive reality, sometimes due to convention and fear, or just a lack of creativity. This is the conception of individual liberty for liberalism that denies the idea of an enemy, of an antagonist (Mouffe, 2005). A *Critical Spatial Practice* needs to be carried out in a geopolitical dimension, constructing new possible realities, or, destructing universal positionality. Traditions and conventions usually obstruct us from having new understandings of our contexts. Positivism has always been hidden behind the shield of quantification and objectivity, trying to depoliticize social and creative processes, a very convenient strategy for technocrats who are still trying to find consensus, avoiding conflicts inherent in society (Merrifield, 2015). If there is a *collective identity*, it is a complex one, there is no predetermination so it becomes impossible to ignore the particular, nothing can be excluded. It seems impossible to think about achieving consensus and universalism facing such diversity, because differences are always present, so universal satisfaction becomes impossible.
Lately, disagreements and opposites sides seem more present and visible than ever and disagreement isn't necessarily a problem. When it comes to public spaces, differences usually tend to be disappeared by an idea of inclusivity that homogenizes everyone. The idea of a perfect consensus is impossible; it is not wrong to abandon that conception. The projection of a collective democracy cannot have an idealized vision of society. The issue is how and from what critical position we tackle conflicts and try to collectively develop alternatives scenarios. Nothing is neutral. The *Public* dimension is in danger if we continue to try to homogenize our societies. Power relations generate conflicts, but that's not a problem in itself, the problem is not to face them in our practice, and also, to think that universal satisfaction is possible. Expansion, conflict, and, contradiction are necessary, just as it is necessary to set aside from the professionalism perspective that constantly seeks to demand consensus and reconciliation. Ideas and paradoxical thinking should never be branded as beaten banalities (Merrifield, 2015).

4. Affectations and dislocations in times of change;
Discipline Mutations & the Battle to Re-gain Agency

Speaking of disciplines nowadays is not easy because of their normative condition. Codes of norms, precepts, predefinitions, and prohibitions. The structure of disciplines is creating a mass of obedient individuals who follow in the footsteps of their guides and teachers. On the other hand, academic institutions are oriented to develop and preserve knowledge and make it seem as though this knowledge should be controlled only by them. Therein lie its power and its exploitation of others. Opening up that knowledge, to create a more universal and understandable language, seems to be the challenge to create cross-pollination between disciplines, and to finally restructuring them. It wasn´t difficult to see that our ways of developing our disciplinary practice, at least in a context of deep crisis, had become dissociated from the complex problems that affected us as a society. The critical vision towards the previous generation of professionals was radicalized once some young practitioners became part of social movements, which began to evidence the tremendous inequalities that afflicted us as a society and as practitioners considering the working conditions inside professional structures. In just a few years the generational break has been evident. It hasn´t been that a whole new generation has turned to look for new ways to develop its critical practice focused on the complexity of reality, but it has positioned a more radical debate within disciplines. The concerns today are different; the old disciplinary consensus has become obsolete. The initial determination has been to work collectively, mostly through the sum of individual motivations with similar questions, instead of the sum of individuals around a preconceived project. Even with obvious inconsistencies and contradictions, a group became part of a generation that, more than trying to break and question the limits of the discipline and profession, has tried to link and incorporate new elements from other fields of action.

The reinvention of the discipline in terms of *Critic* and *Practice* related to socio-cultural changes is urgent. Understanding how disciplines are reconstructing their principles of development and linkage between them is a key factor. The understanding of the changes in their focus of attention will be a central theme in a post-discipline era where disciplines are beginning to adjust to generational changes. As practitioners, it is necessary to adapt to the cultural, social, scientific, technological, material, political, and conceptual transformations. Disciplinary isolation is not the path, it is necessary to understand and forge links with *others* within the power system that transform our contexts. Critical self-recognition is one of the determining steps to re-evaluate personal and collective objectives and positionality, to then intervene in our contexts. On the other hand, it becomes relevant to review the crisis in higher education institutions, which is reaching unprecedented levels. While the issue of


Fig. 4

access remains crucial, some academic institutions have become spaces for struggle, tension, contradiction, and, radical protest, but they are just a few of them. It seems important to question the space and role of these institutions as a place of study under the neoliberal system. Following certain trends, academic institutions should become a space for political dispute and debate, and leave aside the figure of *knowledge industries* where knowledge itself has become a *commodity* (Meineche Hansen & Vandeoutte, 2015). The academy should understand the study as a *Critical Practice*, but for this to happen, it is necessary to examine and question its organizational structures. Institutional margins that are promoting new types of study and practices with the use of alternative pedagogical methodologies for collective learning should be better understood. This could be a possible way to enhance an existing academic resistance against professionalization under a neoliberal logic.

In the middle of a wave of social upheavals around the world, it becomes relevant to understand -from disciplinary and academic spheres- the importance of the opposition, confrontation, and the subversive character that they have demonstrated. Higher degrees of independence far from corporate authoritarianism is required in a *Critical Practice* exercise to resist the prevailing domestication and professional homogenization. To advance in these requirements, it becomes necessary to step on soils that are often criticized for not having a solid analytical ground. When we think of the reality that *could be*, with horizontal work structures based on processes constituted in the foundations of the society, and with ideas and values beyond professional or disciplinary typecasting, the conservative establishment is inevitably going to question it. However, it seems to be the only way to expand, even in an eclectic way, our visions of the future under the logic of critical thinking and practice. The above seems possible through an education and a practice that could question and problematize reality to reveal its structures and in this way, making possible a conscious and critical intervention on it (Freire, 1968). The very objective of post-disciplinary education should be to irrupt and question the practice of the future, not to continue perpetuating the same disciplinary increasingly obsolete prescriptions. Sometimes it is necessary to stop glorifying good buildings, to turn to social, environmental, and spatial injustices that continue to occur every day. If the disciplinary work is not politicized, putting ideologies back in the foreground, it will continue to be relegated to technical or conceptual fields outside the discussions of our future agendas.

Under an elitist, hegemonic, and hetero-normative preconceptions of socio-spatial coexistence, it is necessary to realize that it is useless to continue replicating the same operating formulas within disciplines. It has begun to be understood that individual actions, or even the design of innovative solutions, to cope with the drastic conditions of reality are no longer sufficient. The idea of becoming a participant in these processes of global change entails the loss of authorship, personal ego, and the certainty facing a process of collective construction that requires trust in the human group rather than in some predeterminations of a project. In a time of a severe political representation crisis and large-

scale environmental emergency, it is essential to debate about the current state of affairs; the forms and meanings of the territories we inhabit, and the importance of the social and economic systems we employ. The idea of the problematization of our living spaces is necessary to try to create friction spaces between divergent positions. To leave spaces of subordination, debate and conflict are necessary as it is part of the creative destruction –as a civic cooptation from the capitalistic system- to face situations of hierarchy in the hands of a few factual powers.



Fig. 5

This *new field of action* is under constant change; its limits are flexible or maybe imprecise. Traditional categories lose meaning and the forces that are present are constantly reformulating their actions. In many cases, the same practitioners have subtracted themselves from the theoretical-intellectual discussion about the definition of their *Critical Practice* or the field in which they are participating to put their energies in acting without preconceptions. It has been the relationship between different variants that have built the field according to the contextual occasion. The initial impetus could be the critical questioning in itself that turns to the systems of power and representation in its broadest spectrum. The expansions and contractions of the field are the ones that end up enriching and characterizing specific proposals. The practice is transformed for confronting spaces of complexity, mediating between unconnected points or variants, and, through a subversive political position, disputing the spaces of political and cultural power. For the above, the interdisciplinary and collective character is decisive. This component allows operating in different ways depending on the opportunity, so the work bodies constantly mutate and have the ability to develop multiple and varied work tools. As they are not constituted as hierarchical work bodies, the various decision-making mechanisms they employ are allowed to find multiple work formulas that make the results always particular. Being self-managed and independent practices, the different agents within turn to the performance of tasks that often escape their professional competence, so that a fairly transversal feature emerges in them; amateurism (Merrifield, 2015). This allows that with absolute freedom the members turn to material or discursive production in various fields. Also, due to the lack of technical or theoretical knowledge in some areas, it allows them to seek new alliances and horizontal collaborations with actors from fields of knowledge traditionally away from disciplines such as architecture.

The spaces of work coexistence become decisive in the results. Not being in situations of labor constriction, these practitioners tend to work-dynamics rather playful. Also, as the topics they are addressing are aligned with their ideological convictions, the creative process is never constrained to specific conventions in their interaction dynamics. The creative process ends up diluting the times' schedules and spaces traditionally associated with paid work. This ends by adding a component of extreme power, as it is the collective subjectivity character in the projects. Their proposals are transformed into extensions of the work bodies, indissoluble of themselves. The projects tell personal stories, collective stories, contextual stories, and generational stories, ending up amplifying multiple voices within a particular narrative. In this way, their experiences and knowledge production are helping our contexts to be less hierarchical, less exclusive, less hegemonic, and less individualistic. This is how scientific methods and the hypotheses that lead to condition the work process to reach certain expected results are being put aside.

Image Captions

Fig. 1. Collage of the *Global State of Crisis* made by the author.
Fig. 2. Theoretical Diagram and Curatorial Mapping for the research made by the author.
Fig. 3. Collage made by the author of some examples of Critical Spatial Practices creates different collectives around the world. List of Collectives involved in the research; *Grandeza, Fake Industries, DAAR, URBZ, RaumLabor, Studio Miessen, Left Hand Rotation, Office for Political Innovation, Basurama, Todo por la Praxis, Recetas Urbanas, ENORME & PKMN, MAIO, Stalker, Space Caviar, Est Ce ainsi, Plan Común, Urban Tactics, Space Hijackers, We made That, Dig Collective, Fugitive Images, Project OO, The Afterparty Collective, TOMA, Mil.M2, Ariztia Lab, República Portátil, Public Interventions, Supersudaka, Alborde, Horizontal, Taller Comunal, ToroLab, Studio Teddy Cruz & Forman, Common Accounts, Adjustments Agency*.
Fig. 4. Referential Environment of the Collectives, made by the author. This referential universe is composed by ; Archigram, Basurama, Superstudio, Raumlabor, Situationist, Pico Colectivo, Dadaism, URBZ, OOOEstudio, Colectivo Piñen, Cooperativa X, Grapus Collective, Bellastock, Comunal, Zuloark, De Stijl, Todo por la Praxis, Hackitectura, Collective Matter, Fugitive Images Collective, Atelier Bow Wow, Equipo Mazzanti, Umwelt, Alas Berlñin, Oficina Lúdica, Arquitecturas Expandidas, Urban Catalyst, Robert Smithson, John Hejduk, Gordon Matta-Clark, Eyal Weizman, Teddy Cruz, Constant Nieuwenhuys, Cristina Goberna, Urtzi Grau, Olafur Eliasson, Bernardo Oyarzún, Leopold Lambert, Fernando Ocampo, Camillo Boano, Rem Koolhaas, Ray & Charles Eames, Okwui Enwezor, Jean Pierre Raynaud, Tatjana Schneider, Joseph Grima, Nikolaus Hirsch, Lina Bo Bardi, Andrés Jaque, Ariadna Cantis, Buckminster Fuller, Cedric Price, Tania Bruguera, Jack Self.
Fig. 5. Collage made by the author from exercises carried out in conjunction with students and teachers of the Situated Practice MA at the Bartlett, UCL.

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Lina and Bardi's Lodoli
A thread in the labyrinth

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Abstract

The Venetian Friar Lodoli, known as the "Socrates of Architecture", usually appears - according to Marc J. Neveu - as a footnote in most history books on modern architecture. Nevertheless, Lodoli's eighteenth century pedagogical approach and ideas may have influenced deeply Lina Bo Bardi as a young architect.

This article aims to establish a dialogue between the sources of three texts - where Lodoli's lessons were studied and mentioned during P.M.Bardi and Lina Bo Bardi`s editorial production - with part of her architectural and didactic work. The first moment studied is while Lina was still in Italy, collaborating with Bardi's article for *Lo Stile* magazine (1943), under the direction of Gio Ponti. Pietro Maria Bardi relied on Lodoli's lessons to give historical background to utilitarian goals present in Italian's Rationalism. Later in Brazil, while the couple was directing *Habitat*, the interest in Friar Lodoli reappears at the section about chairs in the magazine's first edition (1950). Carlo Lodoli was also very present at Lina Bo Bardi's pedagogical thesis (1957).

From these texts and related bibliography pertaining to the Bardi's couple, the interest on Friar Lodoli's thought can be traced and a comparison established with Lina's work, especially in relation to chairs, references, materials, ornaments, architectural education and the concept of beauty. Therefore, to put some of Lodoli's teachings – and from his immediate circle and later repercussions - side by side with some of Lina's architectural production might help understand the extents of this influence.

Many researches on Lina Bo Bardi's work focused on the connections with her contemporary architects or pioneering precedents in twentieth century architecture. On the other side, when it comes to principles that guided her unique architectural expression, it might help looking a little bit behind.

Key words: Lodoli, Lina Bo Bardi, Pietro Maria Bardi, modern architecture.

1. Introduction

This article is an attempt to compare the ideas of the polemic *Settecento* Venetian "architectural theorist" Fra Carlo Lodoli (1690-1761), known as the "Socrates Architect", with the works of the twentieth century Italo Brazilian architect Lina Bo Bardi (1914-1992). This will be done through establishing a dialogue between the sources of three texts - where Lodoli's lessons were studied and mentioned during Pietro Maria Bardi and Lina`s editorial production, plus part of her didactic work.

The first moment studied is while Lina Bo Bardi was still in Italy, collaborating with P.M.Bardi's article for *Lo Stile* magazine, in 1943, under the direction of Gio Ponti. Pietro Maria Bardi relied on Lodoli's lessons to give historical background to utilitarian goals present in Italian's Rationalism. Later in Brazil, in 1950, while Lina was directing *Habitat* magazine, the interest in Friar Lodoli reappeared at the section about chairs in the magazine's first edition. Carlo Lodoli was also very present at Lina Bo Bardi's pedagogical thesis: *Propaedeutic Contribution for the Teaching of Architecture Theory*, completed in 1957.

Introduced through the Italian art critic P.M.Bardi's selections for the *Lo Stile* article, the thoughts of the Franciscan Friar, may have philosophically nurtured Lina Bo Bardi's future work. The writings of Lodoli's immediate cultural circle and from the personalities influenced by his sayings might, as well, have continued to stir Lina's imagination.

2. Lodoli's influence

Some fifteen years ago, Marc J.Neveu wrote on his thesis: "Carlo Lodoli (1690-1761) exists as a footnote in most major books of modern architecture. (…) Though I would not argue his influence, I doubt his role in the development of a structurally determined functionalism. The issue of influence is always present as very little of his writings have survived and his built work amounts to a few windowsills. He did, however, teach architecture."[1]

Neveu drew attention to a singular fact: more than an architectural theorist – worried on registering his ideas for publication - Lodoli was an architecture teacher, who employed a dialogical strategy with his students and friends. The Friar was famous for employing Socrates' refutative mode of reasoning in order to reach critical thinking.

As it is known, Lodoli's ideas related to the origins of the functionalist thought - though not much present in architectural history books - had not been a simple footnote on essays that belonged to art and architectural history journals and bulletins in the twentieth century.[2] During his lifetime, Lodoli's thought appeared partially published in Francesco Algarotti's *Saggio sopra l'architettura* (1756) and, after his death, in Andrea Memmo's *Elementi dell'architettura Lodoliana – o sia - L'arte del fabbricare con solidità scientifica e con eleganza non capricciosa* (1786) – claimed by the author to be closer to the Friar's insights and reasoning. Francesco Milizia's treatise: *Principi di Architettura civile* (1781) was also influenced by the Friar's thought and had a broader scope of influence, though also criticized by Memmo's writings as an improper appropriation of ideas.[3]

On what refers to Lodoli's influence on Lina Bo Bardi, there are many researches dedicated to her built work, drawings and writings that mention it. The scholars Zeuler Lima and Cathrine Veikos have already shed some light on Lina's interest on Lodoli relating it to her work and teachings.[4] Nevertheless, our intention with this essay is to show that Lina's acquaintance with Lodoli's vision for architecture was considerably wider in scope and deeply rooted.

3. Three moments on Lodoli: 1943, 1950 and 1957

In June 1943, one month before Milan was under Nazi military forces,[5] the front cover of *Lo Stile* magazine was dedicated to Father Lodoli. It was the same portrait as represented in Memmo's *Elementi*: the friar appears in his votive clothes, with gray hair and a smart look. The portraits' frame, as it was often used in treatises, revealed architectural tools, drawing papers that indicated pure geometric figures and other that insinuated a floorplan. But there also appeared what was most recognizable his own: the two most famous sayings that synthetized his ideas and attitudes towards the world. The first, an architectural original statement: *Devonsi unir e fabbrica e ragione e sia funzion la rappresentazione* – that is, construction and reasoning must be joined, and its functioning (logic) expressed. The second one, a religious excerpt from Jeremias 1:10, prophesizing: *Ut eruas et destruas, ut plantes et aedifices* – that is, to throw down and to destroy, to plant and to build.[6] Considering the moment, it was a very strange dictum to be in the front cover of a magazine when the city of Milan was in constant alarm due to British attacks.

Even though the magazine was directed by Gio Ponti and had Carlo Pagani as chief editor,[7] it was Pietro Maria Bardi who was responsible for the main article: *Il Socrate dell'Architettura*. Lina Bo worked at that time as an illustrator for Ponti's magazines, and there figured one of her drawings in Bardi's essay, simply signed "L.B.". This occasion was three years before Lina and Bardi got married - and until now there is no precise historical register for when they began dating. So, let us consider it only as a professional collaboration between the two, where Bardi's wit and fame continued to impress a young Lina Bo.[8]

Bardi started his *Lo Stile* essay in a very *Iodolian* way, telling an anecdote that recalled ten years behind the time of his writing, in 1932, while participating of "an extravagant architectural congress, held in board, between Marseille and Piraeus (…)". He mentioned the fourth CIAM to introduce the reader to one of its participants, an unknown *Dottor. W.*,[9] whom he described as being French, a doctor, a scientist and a close friend and follower of Le Corbusier – someone whose "discourse rested in the implacability of a dilemma: to choose between ruins or happiness (…)". And with happiness he associated the "rationalist religion". He nicknamed his new acquaintance *il Socrate architetto* – as he recollected Bardi of "some bygone reading". According to Bardi, *Dottor W.* reminded him of Friar Lodoli for "not being an architect, though participant in construction's aesthetics, a popularizer of ideas that came from his exquisite common sense, ideas in contrast with the rest, and imbued with a moralistic ideal, a worker for humanity's wellbeing, and a sort of an illuminist (…)". But from there on, Bardi's essay forgot both his French friends and concentrated in indicating the reading of Memmo's two volume treatise. He continued by affirming categorically that the polemic for a "natural architecture" did not emerge, in his own words, "(…) from the theorist of functionalism, neither from Sant'Elia, neither from the supporters of the new objectivity (…)", but from the incendiary words of Father Lodoli.[10]

From today's perspective it might be assumed that P.M.Bardi, due to the uncertainty of the political outcome of the war, wanted to affirm that modern architecture did not belong to any political ideology. For that, he had strategically omitted the name of Le Corbusier's right-wing friend *Dottor W.*, and at the same time, dedicated a whole essay to a an admired theme in British art circles.[11] From the mention in the first paragraph to a "rationalist religion", it is noticeable a not so naïve twist to a "natural architecture", mentioned in the third, and to an "organic architecture" mentioned in the last.

When P.M.Bardi began to describe Lodoli's biography he entitled the article's section as: "Polemist and art collector". The friar was described as loving architecture above all things, despite never professing it. A man who was against the mainstream thought of his time, which he cynically battled with words, performing a peripatetic, well-humored, often sarcastic, discourse. A *connoisseur* who collected art objects, such as painting and sculpture, but also a great gatherer of books.[12] Somehow, P.M.Bardi seemed to have found in Carlo Lodoli a sort of *alter ego*.

Lina's work in the Italian magazine was reserved for the graphic part (Fig.1): an interesting dialectical disposal of images, where Lodoli's attention to the human body necessities was highlighted – that is, his notable sermon to make concave the bottom seat as well as the back of the chairs. As well as the considerations over the rationalist thought: there figured a collage that linked modern Le Corbusier and his allusions to the Greeks.

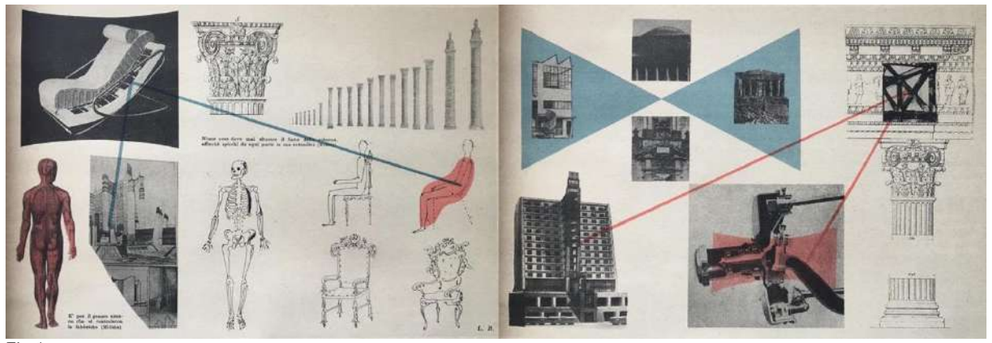


Fig.1

As a result of those political uncertain times in Italy, it did not take four years for P.M.Bardi and Lina Bo, converted in a formal couple, to move and settle in Brazil. Coincidentally, at the same year of Lodoli's cover edition at *Lo Stile*, Brazilian architecture was being world known through the North American publication *Brazil Builds*: the promise of a land that invested in the rationalist idea was surely something appealing for both of them.[13]

After three years in Brazil, in 1950, the Bardis issued the first number of *Habitat* magazine, an activity that would parallel and broadcast their work at *Museum of art of São Paulo* and their furniture atelier, the *Studio d'Arte Palma*. At this time, Lodoli's ideas on chairs received a whole page in the magazine: a literal transcription from an excerpt of Memmo's treatise. Lodoli's argument served as an historical warranty (a "prophecy") to what the article called a "rational and reasoned" architecture. [14] Consequently, the work presented in the next article: "New Furniture" was related to it, where Lina's and Palanti's chairs were exhibited. There is an interesting historical twist here: while Lodoli, in the eighteenth century, asked whether architecture could follow the rationality of a simple chair; *Habitat*'s quest in the nineteen-fifties stood for the need of a rational furniture - an industrial design - comparable to the country's development in modern architecture.

In1957 Lina Bo Bardi finished her thesis: *Propaedeutic Contribution for the Teaching of Architecture Theory*. In that period her major architectural built work was her own house - the Glass House (1951) - in *Morumbi* neighborhood in São Paulo. The thesis was made to be presented for the chair of theory of Architecture in FAU-USP, for a professor selection contest that never actually took place. It surely was an impressive theoretical effort, that might have been the origin of what some scholars still mention as Lina's "transformation" in her trip to Northeast Brazil, that occurred in the following years. At *Propaedeutic* the enigmatic Venetian teacher was very present, sometimes in openly declared citations or at times in more veiled ones, linked to the thread of repercussion of the Friar's thought. Lina's thesis can also be read as a subtle attack to what was called Brazilian's "new academicism".[15]

4. Six ways of comparisons

Having introduced the three moments of the Bardi's couple interest on Lodoli's thought, let us go through six ways of comparisons that were initially selected from Bardi's article in 1943, and are now put side by side - when possible - to *Habitat's* article and Lina's thesis. The themes elected were *chairs, references, materials, ornaments, education and beauty* - covering some of Lodoli's ideas as paths to approach how this precedent shaped Lina Bo Bardi's work.

4.1 Chairs: as an architectural experiment

According to Bardi's article for *Lo Stile*, the friar's rationalist thought could be better expressed in his vision related to chairs. This was his "masterpiece…or the most secure piece of architecture done under his guidance and design", called *architettura curule* (in reference to the curule roman imperial seat), at that time also called *arte de' facocchi* (or art of the chariot makers). Solidity, lightness, comfort and ornament should all be working together according to the artist interest, in an object that could be constantly perfectionated through practice.[16] The friar preached for a fashion that would not alter the intrinsic utility of things but would search for an "enchanting variety, that pleases and refines so much the geniuses".[17] Lina's first steps in design followed this *lodolian* principle: first she mastered the making of rational chairs to then adventure herself in actual architecture.

In *Habitat*'s article (1950), Brazilian hammocks were said to have served as inspiration for *Studio d'Arte Palma*'s work on chairs. Analogous to Lodoli's ideas, the native hammock represented the paroxysm of the modelling of the human body, such as the friar's preaching had demanded. Also shown in the article, the simple joints (known as popular ox-chariot joints) were used in the detailing of one of the chairs presented. Corroborating to the *fare cocchio* techniques. This same detail was used by the architect in later projects, as the wooden stairs in *Museum of Popular Art (MAMB)* in Salvador, Bahia. In historical treatises, referenced in her thesis, such detailing in wood can also be found. All these being European precedents that guided her acute eye towards the techniques used in Brazilian vernacular culture, resulting in a syncretic creative attitude.[18]

In a chair developed exclusively for her home - known as chair with brass balls -, Lina also applied *lodolian* utility and precedent principles. At this time, she reinterpreted an imperial curule seat, similar to those later used by the Merovingian successors, in which the curule seat received two orbs for the placing of hands.[19] Lina's chair is definitely not a throne – its lightness reminds more Renaissance domestic versions -, it was made in number of six to be disposed as a group in her living room. Nonetheless, it gave to the *symposium* seated around her some imperial flair.

In many chairs, projected by Lina and her team throughout her life, the historical precedent or the reference to an archetype was present: *Giraffe stool* and *Friar Egidio's chair* are good examples. The former can be identified as a variant to the traditional *sgabello* and the last one to Florentine folding chairs - similar to those Renaissance originals the couple collected and displayed in their own house.[20]



Fig. 2

4.2 References for imaginative thinking

Lodoli's famous critique to Vitruvius's historical method, also evident in Bardi's 1943 essay, advocated for a better consistency in the field of historical research. The friar defended the broadening of its approach and scope - before anyone could propose an architecture as exemplary, such as the Greeks. For him, simple constructions and clear principles were immutable in time, belonging to an eternal truth: "the pure reason of things is even older than the ancients", was a sentence attributed to the Venetian philosopher. Though radical in his ideas for a true and logical architecture, Lodoli was a product of his time, from where he inherited the love for the arts and a fervor for the sciences, which, as Bardi put it, had been especially inspired by Francis Bacon and the "powerful" Giambattista Vico.[21]

Also, in Lina's 1957 thesis, Vico was the precedent philosopher to many of the her chosen references, notably in the Italian and Anglo-Saxon world – in works where analytical studies were not separated from their poetical counterpart.[22]

Kauffmann Jr. once wrote that Memmo's publication on Lodoli, which made a stir in Italy in the 1830's, may have influenced the circle of two influential Americans: Horatio Greenough and Ralph Waldo Emerson.[23] For Lina, these romantic thinkers understood architecture in its cosmic sense. Both artists also influenced Sullivan and Wright, and therefore, *organic architecture*.

One of Lodoli's contemporaneous friend, another Giambattista, was Piranesi. This Italian artist explored in his etchings, in a sometimes contradictory or not fully understood manner, the historical conflict also brought up by Lodoli. Piranesi was central in the *Settecento* dispute for the origins of architecture, always favoring the Roman constructions over the Greek's.[24]

Piranesi's etchings of ruins invaded by vegetation, Wright 's organic architecture, and a vernacular architectural example were present in Lina's thesis chapter regarding *Architecture and Nature*. Lina left, perhaps intentional, traces to her architecture insights: such as the garden roof and the embraced tree. And this can still be identified throughout her other projects: as the *Sesc Pompeia Leisure Center.* Here, the sports complex concrete towers can be imaginatively related to Piranesi's Imaginary Prisons and its fantastical drawing bridges. From Piranesi's *Carceri*, there are even more elements that can be related to other of Lina's unbuilt projects, such as the circular stairs around a tower and the trident form of the pillars head. There is even a possible parallel between Lina's last vertical garden project: the *esedra* as she called it, for the never built *São Paulo's City Hall New Office Building*. Piranesi's etchings of the *esedras* at Trajan Bath Ruins could have been a powerful inspiration. Rather than images of ruins and prisons, in Lina's hands, they were converted into eloquent architecture. Lina, after all, chose a new sort of "happiness".[25]



Fig.3

There is a complex web of references, that finds its root in Vico's *New Science* and its architectural theoretical output in Carlo Lodoli, that influenced Bo Bardi's work. According to Luca Tateo, "Vico showed that *meaning* is always elaborated in linguistic and iconographic forms, so that metaphorical and imaginative thinking are always present". In the architectural examples above mentioned, Lodoli might have assumed the linguistic and Piranesi the iconographic form in Lina Bo Bardi's imagination.[26]

4.3 Materials and the environment

The Italian critic P.M.Bardi forgave Lodoli for leaving almost nothing written behind. He justified: "to put in order the diabolical fuse of his illumination, would surpass the great strength that his ordering and discipline capacity could allow."[27] Bardi remarked that one of the friar's unfinished works and most fundamental intuitions was to search in history a relation between environment and architecture.

On what stood to material use in architecture, Bardi also recalled in his article that Francesco Algarotti had attested the friar's respect towards the indole and nature of each matter as being the only way to reach a "legitimate harmony and perfect firmness".[28]

The Italo Brazilian architect dedicated a whole chapter in *Propaedeutic* to the theme: *Materials and Architecture*. She opened the chapter mentioning the idea of one of first followers of Lodoli's track: Piero Estense Selvático. Lina wrote that materials, and not the different environments, were what defined architecture. To illustrate and update it, she referred to the extensive use of glass panels in North America's architecture in the late fifties. Notwithstanding, Selvatico's lessons in the eighteenth hundred were based on the indole of the materials which the different people had access to, in consequence of their natural environment. For him, a history of architecture had to be based on the understanding that constructions were subordinated to the nature of the materials that were available. [29] Selvatico certainly put forward in his classes some of Lodoli's intuitions.

Curiously, Lina also assumed in her thesis some of Bardi's sarcastic expressions, when criticizing constructors that let themselves being perverted by ignorant clients, echoing: "ruminators of backwardness" that promoted the "rechewing of styles"! At the end of the chapter, confessing her theorical debt, she wrote: "are we possibly putting forward the old polemic between moral and aesthetic from Lodoli and Milizia?" The moral conflict mentioned was an advice against the waste of material, or as Lodoli once said "even if you were to build for the greatest king in the world,…", nothing would justify the bad use of matter.[30] This also stood as a political statement concerning Lina's view of economy of materials, or the idea of letting it expressive in its raw appearance.

As many scholars have already pointed out, Lina's project can surely be interpreted as lessons in the pursue of material indoles: profiting from the plasticity and the crudeness of concrete or brick, or even by considering the use of different mediums and constructive techniques in different locations.

4.4 Ornament from necessity

On what refers to decoration, Bardi introduced his readers to a dilemma: Algarotti's descriptions did not match Memmo's account of his master. Algorotti described Lodoli as an enemy to all ornament, while Memmo attenuated saying that Lodoli would condemn only unreasonable decorations, such as the cornices in the interior of a building or elements that would be analogue. His motto was: "(…) not to bring the parasol when standing at the shadow (…)".[31] It is not surprisingly that, in his defense of a rationalist architecture, Bardi assumed Algarotti's version to be more faithful to Lodoli's ideas. Nonetheless, he confessed that Memmo might have been more familiar to the transformations of Lodoli's thought and, somehow, the biographer would have decided to avoid absolute conclusions on certain themes. In his selection of *lodolian* principles, Bardi went forward and stated that the genial Venetian foresaw that the trust on engineering was the only possible escape from the Babylonian architecture of his time, as ornament could only rise from "necessity".[32]

When studying Lina's thesis, the scholar Cathrine Veikos highlighted the restatements of Lodoli's ideas: "ornament should be an integral part of the fabric itself; so that whatever is represented must appear of service".[33] Taking into account the use of color as an ornament, the red varnish that was later painted over (*Museum of Art in São Paulo) MASP*'s concrete structure stood faithful to Lina's commitment. The varnish was justified for waterproofing the concrete from deterioration.

Even the Mandacaru flowers made from iron rebars, that burst from the concrete walls at *Sesc Pompeia Sports Complex* have a parapet function. Much earlier than her project for *Sesc,* Lina had reproduced in *Propaedeutic* one of Karl Blossfeldt botanical photographs and also one of Louis Sullivan's drawings, both can be seen as iconographic precedents to this detail that, apart from the red ball, might be more analogous to the slim and elongated structure of a Lina's Mandacaru than the cactus plant itself. Lina never defended art as an imitation of nature, but the subjection of architecture to natural laws, and the subordination of ornament to necessity: "The subordination of the drive towards aesthetic statements to the 'purpose' of a work is the base of its architectural *sincerity* and another proof of its *validity*."[34]

Fig.4.

4.5 Education: free from dogmas and full of doubts

In *Lo Stile* the Italian art critic, P.M.Bardi, wrote that the friar lacked prudence when speaking about the architectural education. The Franciscan, after already having attacked Vitruvius and exposing the contradictions inherent to the five classical orders, started advocating for a revolution in the architectural teaching institutes: "(…) so that civil architectural will not be imprisoned to the stages, the parts, the composition or architectural terms up to now used(…)".[35] Not surprisingly, fourteen years after Bardi's text, Lina's first mention to Lodoli in her thesis, also invoked this principle: "not to imprison Architecture". She defended a study of the past and of historical treatises, though not as formulas to be blindly followed, but as records to raise debates in class. Lina declared architecture should have freedom from the past which, as she alerted, differed from ignoring the past.[36]

Even though Lodoli did not fully explain his new educational method, P.M.Bardi deduced that it was based on a technical education, such as the one received by engineers. Architectural education should "demand principles that would assure the production and fulfillment of the final object."[37] In the reassurance of his rationalist engagement, Bardi selected, from Memmo's account on Lodoli, what

interested and strengthened him - as his friendship and partnership with the engineer Pier Luigi Nervi in Italy.
Nervi was also a declared “Master” for Lina Bo Bardi in her thesis, someone whom she also compared to Frank Lloyd Wright, in their “humble conscience” toward nature and the “construction activity”. From Nervi, Lina recalled his reproach to architectural snobbery: “the architect is just “a mason who knows Latin” - a statement which she employed to condemn those scholars with “critic-literary presumptions who lack essential basis(…)”.[38] Nervi was also compared to Milizia (and therefore to Lodoli) in his definition of the construction activity: “(…) it creates the environment of our life, exercising a mute, but very efficient, educational action”. More than once, in *Propaedeutic*, Lina asked for a greater proximity between architecture and engineering, which also served as a reinforcement of her position closer to São Paulo’s architectural group.[39] Throughout her life, Lina trusted and had close support from engineers, or architects that had a strong technical basis – first collaborating with Nervi, then J. C. Figueiredo Ferraz and finally with the architect João Filgueiras Lima. Often allowing the structural part of the building to assume a central point in her architecture.
Though confident in a technical education, in *Propaedeutic,* the chapter dedicated to *Architecture and Science* was one of the most poetically and philosophically written, in a conscious will to approach science and art: “It is convenient that our theories in elaboration be, at the same time, illuminated by conviction and obscured by the shadows of doubt that are proper to our age. If the scientist can be sure, or if, at least, the sum of his experiences can take him to find a certainty, and a truth, what is the truth for art?”[40]

4.6 Beauty as energy

The last theme brought up by Bardi in his 1943 essay was on Lodoli’s idea over the concept of architectural beauty. Here Bardi introduced the reader to the *lodolian* concept of “energy”, that is, an architecture that “exposes its truth, (…), so that any part could stand up for what it compromises”. For the Italian writer and art gallerist, Lodoli’s compromise was with “reason and function, which reunited in an ‘organic architecture’ would produce energy (…)”. Or simply, beauty. This was the first time that Bardi, in his text, mentioned the concept *organi*c, a term that Andrea Memmo in his treatise attributed to Lodoli’s creation.[41]
In 1964, Edgar Kaufmann Jr. had recognized that Lodoli’s ideas were “courageous and prophetic” when he associated the friar’s structural logic insights to Mies van der Rohe’s work, “(…) Lodoli at once noticed and promptly praised the way in which lintels were lightened floor by floor as the structure rose, reflecting the diminishing loads they had to bear. A very similar device has been admired in our own day, the stepped-back vertical concrete posts in Mies van der Rohe’s Promontory apartments. In both cases, two centuries apart, a clear grasp of structural logic led to an eloquent expression in design.” [42]
Thus Edgar Kaufmann didn’t use the word beauty, he described an architecture that, as being the expression of its internal constructive logic, becomes a pedagogical design for it exposes what it structurally compromises.
Memmo’s treatise that belongs to Lina and Bardi’s collection, shows several marks and marginalia’s that are easily associated to Bardi’s 1943 article and Lina’s 1957 thesis. In one of those marked parts, Memmo exposed more on Lodoli’s beliefs regarding beauty: “Architecture is not similar to fashion (…) As a scientific vessel constructor will always be calm, if the vessel wouldn’t please the taste of those, that without nautical knowledge would judge it by their material eyes as being ugly, or if one of their curves caused in them a disagreeable feeling, when it was very fast and resistant to the stormy sea, as well as having those essential parts that precisely define perfection: so will the wise architect laugh of the judgement of those, for not having solid knowledge to decide in architecture, misjudged his work.”[43]
Paradoxically, Lodoli’s own work described this well. The few windowsills that remained from his art, that were slightly efficient for its use, never really quite pleased him.[44]
Lina hardly spoke about beauty in her thesis. Later in her life, she confessed it as being a natural search when projecting, an ideal. For her, the pure technique of things did not have its expressive value by itself, but only in the efficiency of its employment.[45] Many times she praised the *kitsch* and the liberty in ugliness, associating its condemnation to bourgeoise class prejudices. Despite that, after having her masterpieces criticized, she ironically said to the press: “I hope that the sports complex will be ugly, uglier than *MASP*.”[46]

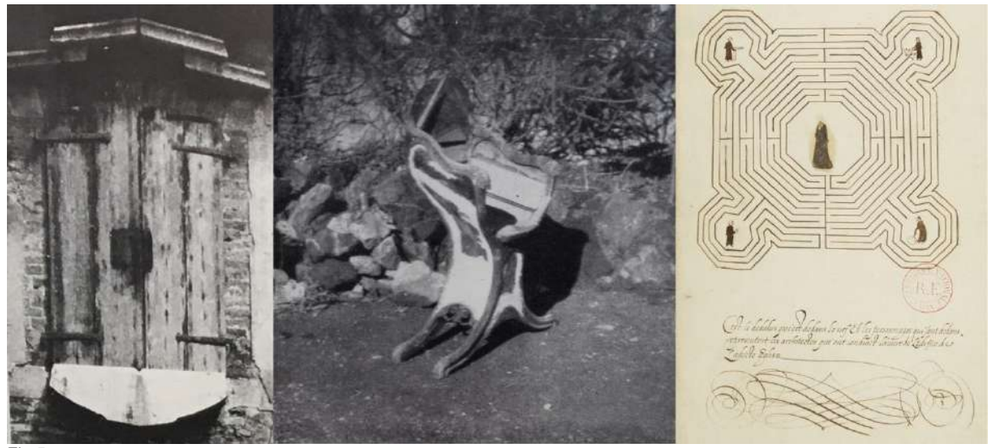


Fig.5

5. Conclusion

In the cover of Lina’s thesis figured a labyrinth. There are many theoretical threads to hold while adventuring through it: this article tried to follow the references that linked to Fra Carlo Lodoli, since its connections had also been present in previous publications by the couple. Bruno Zevi, once said, that from Leonardo da Vinci’s prophecies to that of Carlo Lodoli’s, Italians acquired a protectionist desire to trace Rationalism origins to Italy. [47] This idea might apply to the Bardi’s couple.
For us, recovering Lodoli’s thoughts - untangling the references from Bardi’s initial 1943 article, *Habitat*’s 1950 publication, Lina’s 1957 thesis and also referring it to her built work - is an invitation to search in old texts the forgotten origins of confused quests and to reconstruct a sort of lost dialogue between them. It was done, not to reach closed conclusions on these themes, but rather to explore Lina’s syncretic imagination.
Pietro Estense Selvatico - one of Lina’s reference in her thesis and a follower of Lodoli’s ideas - when starting his lessons, presented himself as “an old wanderer in arts labyrinth”, and offered his writings as “a guide through the tortuous ways,(…) a thread made from a long experience, obtained through a patient study in his youth, from many trips, from the not inattentive inquiry of almost all the most important buildings of Europe, from the research, carried on many public schools of architecture.”[48]
Selvatico’s thread represented the support a teacher could provide from their own philosophical experience.
Much earlier, Giambattista Vico, who Lodoli deeply admired, explained in his book another vision of the mythical labyrinth. In *Poetic Wisdom,* Daedalus was a builder of ships, the labyrinth was represented by the Aegean Sea, and Ariadne was someone who taught Theseus the *seafaring art*, with the threads for navigation, being the only way to battle against the tribute imposed by Minos’ pirate ships. Vico’s way through the labyrinth relied on the mastering of a technique, that is also, an art.[49]
Philosophy and art: Bardi’s and Lina’s labyrinth of architectural knowledge make us aware that they were both in hold of a fascinating repertoire. Lina, however, never tried to impose a fixed program for the teaching of architecture, since life necessities were in constant change. She insisted on a *method*, though, a guided path to reach “design freedom”.[50]

Notes

1 Neveu stated clearly that his final goal with his thesis was to "discuss the ramifications of his studies within the realm of architecture education today". Marc J. Neveu, *Architectural Lessons of Carlo Lodoli (1690-1761): Indole of Material and of Self,* (Doctoral thesis-McGill University. Montrèal: School of Architecture, 2005), 5 and 19.

2 Edgar Kaufmann Jr. pointed out in 1964 that the trail to follow Lodoli's steps had been "apparently untrodden by scholars since the 1840's" with Pietro Estense Selvatico's *Sulla'architettura e sulla scultura in Venezia* (1847), only to be recovered by Julius von Schlosser 's *Kunstliteratur* in 1924. Edgar Kaufmann Jr., "Memmo's Lodoli", *The Art Bulletin,* Vol.46, no. 2 (1964): 159

3 See the chapter: "Il Lodoli, il Milizia, e l'Algarotti" present at Bardi's article. Pietro Maria Bardi, "Il Socrate dell'architettura", *Lo Stile,* L.15, no. 30 (1943): 8. See also: Joseph Ryckwert, *The Necessity of Artifice,* (London: Academy Editions, 1982), 117.

4 The author Zeuler Lima related Lina's work to Lodoli's ideas through P.M.Bardi's essay for the first issue of *Habitat* magazine in 1950: "Still in the first issue, an essay signed by P.M.Bardi talked about the pre-enlightenment Italian theorist Carlo Lodoli, whose work anticipated the notions of functionalism and truth of materials embraced by modern architects in general and Lina Bo Bardi in particular." Zeuler Lima, *Lina Bo Bardi.* (New Haven and London: Yale University Press, 2013), 49.
On the other hand, the author Cathrine Veikos in the introduction of her book mentioned Lina's reading of Kaufmann's *Three Revolutionary Architects: Boullée, Ledoux and Lequeu* (1952): "Her sensibility on this topic may belie her reading of Kaufmann and her understanding of continuity he posited between neo-classicism and modernism". Apparently, Veikos is also crediting to Kaufmann's text Lina's confidence on historical continuity based on Lodoli's ideas: "(…) with reference to the enigmatic Italian theorist, Father Lodoli, are consistent with this idea as well (…)". Cathrine Veikos, *Lina Bo Bardi: the theory of architectural practice.* (New York: Routledge, 2014), 21.

5 Zeuler Lima, *Lina Bo Bardi.* (New Haven and London: Yale University Press, 2013), 24.

6 See Ryckwert and the controversy around the friar's mottoes. Joseph Ryckwert, *The Necessity of Artifice,* (London: Academy Editions, 1982), 117.

7 The chief editor Carlo Pagani was probably being sent to Army at that moment. Lima, *Lina Bo Bardi*, 22.

8 From Kaufmann's *"Memmo's Lodoli"* we know that P.M.Bardi lacked exclusivity in presenting Lodoli at the art circles at that time: "A number of Italian writers on art also noted Schlosser's reference, and hastened to acclaim Lodoli as a 'father' of functionalist theory". Kaufmann listed at least 5 essays that ranged from 1930 to 1947, most of them from Italian writers. Kaufmann, "Memmo's Lodoli," 159. However, the way P.M. Bardi structured his essay and explanation of Lodoli's lessons was significative and deserves closer attention.

9 Dottor W. is probably the French hygienist doctor Pierre Winter, participant at the fourth *Congrès International d'Architecture Moderne*.

10 Bardi, "Il Socrate dell'architettura," 5.

11 Edgar Kaufmann remarked that Emil Kauffmann and "Wittkower before him" were following the trail of Selvatico's thought. Kaufmann, "Memmo's Lodoli,"159.

12 Lodoli studied the arts (sculpture and painting) he had nominated "cadette della principessa", as being secondary arts in relation to architecture. Bardi,"Il Socrate dell'architettura," 5.

13 Philip Goodwin, *Brazil Builds, Architecture New and Old 1652-1942,* (New York: The Museum of Modern Art, 1943).

14 Lima, *Lina Bo Bardi*, 49.

15 From now on, Lina's thesis will be simply referred as *Propaedeutic*.
See Comas' article to understand better the dispute that started with Max Bill's visit to Brazil and the criticism towards a "new academicism". "(…) Costa did not have problems with the academic theory or the word style. All this was too close to the Beaux Arts teaching; it was better to promote an architecture exclusive in its guidelines, associated to the Bauhaus and to the polytechnic education." Carlos Eduardo Dias Comas, "La Revista como Lanza: *Habitat* y Lina Bo Bardi", *Revistas, Arquitetctura y Ciudad: representaciones en la cultura moderna,* 1(2013): 42.
In her thesis, Lina made veiled reproaches to Niemeyer's use of "V" pillars, reviving old rivalries. Lina Bo Bardi, *Contribuição Propedêutica ao Ensino da Teoria da Arquitetura.* (Thesis for the Chair of Architecture Theory, USP. FAU, 1957), 8.
On respect to the dispute with the Beaux-Arts group, see Edgar Kaufmann's mention to Wolfgang Herrmann's study and the assumption that Laugier and Lodoli's "theories differed in all essentials…". Kaufmann, "Memmo's Lodoli," 160.

16 Bardi,"Il Socrate dell'architettura," 6. This assumption recalls Giambattista Vico's *verum ipsum factum*, or to reach the "truth" through making. Luca Tateo, "Giambattista Vico and the principles of cultural psychology: a programmatic retrospective, "*History of Human Science*.Vol.28, no.1 (2015): 52.

17 Bardi,"Il Socrate dell'architettura," 6. The idea of precedent was called to attention by Marc J. Neveu: "Lodoli did not look to historical precedent in search of form to imitate; however, he did look back." Neveu, "Architectural Lessons of Carlo Lodoli (1690-1761): Indole of Material and of Self," 72.

18 The statement here presented is that many techniques called by scholars as "creative peasant simplicity"- Lima, *Lina Bo Bardi*, 106 - were also common in "erudite" treatises on construction. See Rondelet's Treatise and the detailing of stairs and arch construction with wood. *Trattato teorico e pratico dell'arte di edificare* (Mantova: a spese della società editrice, 1832-1840), Tav.CXVIII.

19 See the throne for King Dagobert at the *Bibliothèque Nationale de France* Collection. Check also *The Metropolitan Museum of Modern Art* Collection on chairs.

20 Witold Rybczynski, *Now I Sit Me Down. From Klismos to Plastic Chair: A Natural History.* (New York: Farrar, Straus and Giroux, 2016), 13. Frei Egidio's chair relation to Florentine chairs were highlighted by Zeuler Lima. Lima, *Lina Bo Bardi*, 189.

21 Bardi,"Il Socrate dell'architettura," 6.

22 The English philosopher R.G. Collingwood, from whom Lina grabbed the idea against a history of "scissors and paste" (against a history that denied continuity from the past) was friend to Benedetto Croce and worked in several Vico's translations into English. The American critic Geoffrey Scott and his humanist values was also highlighted by Lina in her claim for a "new humanism". Scott owed part of his thought to Lipps, who also drew his psychological aesthetic theory of the senses from Vico. Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura,"5-6.

23 Kaufmann, "Memmo's Lodoli," 162; Ryckwert, *The Necessity of Artifice*, 117.

24 Consoli, "Architecture and History: Vico, Lodoli and Piranesi," 195-198. This present article does not see clear the diverging thoughts of Vico and Lodoli as Consoli remarked, since Lodoli's *facocchio* example assured the philosopher did not preach for a rupture between new and ancient knowledge, what makes his ideas closer to those of his presumed student, Piranesi.

25 Lina in her book refers to the Sesc's Sports Complex (1977- 1984) as a citadel and relates it to the English word "goal". Ferraz, *Lina Bo Bardi*, 231. Here is considered the possibility she wanted to mention the word "gaol", and therefore closer to Piranesi's imaginary prisons.

In 1978, Manfredo Tafuri published at Oppositions magazine, n.11, the article "Piranesi, the fluidity of forms", which put the theme back to the architectural discussion. Manfredo Tafuri, *The sphere and the labyrinth. Avant-Gardes and Architecture from Piranesi to the 1970s,* (Cambridge: MIT, 1987), iv; 25-54.

From the 1980's forward, Brazilian architecture followed an experimental and less dogmatic path. Sérgio Marques, *A Revisão do*

26 Luca Tateo, "Giambattista Vico and the principles of cultural psychology: a programmatic retrospective", *History of Human Science*.Vol.28, no.1(2015): 63.

27 Bardi,"Il Socrate dell'architettura," 6.

28 Bardi,"Il Socrate dell'architettura," 9.
In the same fashion, more than two centuries later apart and not mentioning its influences, Louis Kahn once said in a conversation: What do you want, brick? Neveu, "Architectural Lessons of Carlo Lodoli (1690-1761): Indole of Material and of Self," 207.
When defining architecture in Propaedeutic, Lina chose citations that related architecture with functional and utilitarian principles, such and Quintilian's quote: *in omnibus que sunt aedificio utilia versatur* to the Vitruvian *utilitas* present in Lodoli and Milizia's text. With great ability she linked this functionalism with voices that appealled to nature – through Algarotti's treatise –, uniting architecture to environment and consequently to urbanism. Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 11.

29 Pietro Estense Selvatico, *Scritti d'Arte,* (Firenze: Barbera, Bianchi e Comp, 1859), 292.

30 Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 13-14.

31 Bardi,"Il Socrate dell'architettura," 9.

32 Bardi,"Il Socrate dell'architettura," 10.

33 Veikos, *Lina Bo Bardi: the theory of architectural practice,* 40.

34 Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 63.

35 Bardi,"Il Socrate dell'architettura," 10.

36 Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 9-10.

37 Bardi,"Il Socrate dell'architettura," 11.

38 Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 47.

39 Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 56. And also at: Comas,"La Revista como Lanza: *Habitat* y Lina Bo Bardi,"42.

40 In *Propaedeutic*, she also mentioned as exemplary the lectures of 1835 from a not so known Napolitan scholar, Pietro Valente, whose ideas were closer to Lodoli's: "the architect has to be able to design and build any civil building, and after having anticipated every minimal part of the whole, guide the construction from the foundations to the smallest decorations(…)".Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 24. Both Nervi (1891-1979) and Valente were influenced by the same educational thread of Lodoli: the thought of Giambattista Vico.

41 Bardi,"Il Socrate dell'architettura," 11. Rykwert, *The Necessity of Artifice*, 115. Andrea Memmo, *Elementi dell'architettura Lodoliana, o sia, L'arte del fabbricare con solidità scientifica e com eleganza non capricciosa,* (Milano: Zara, 1834), 84.

42 Kaufmann, "Memmo's Lodoli," 171.

43 Andrea Memmo, *Elementi dell'architettura Lodoliana, o sia, L'arte del fabbricare con solidità scientifica e com eleganza non capricciosa,* (Milano: Zara: 1834), Tomo: 2, 362-363.

44 Rykwert, *The Necessity of Artifice*, 120.

45 See Lina's 1990 lecture and her classes in Bahia in 1958. Silvana Rubino Grinover; Marina Grinover, *Lina por escrito, Textos escolhidos de Lina Bo Bardi,* (São Paulo: Cosac Naify, 2009),167 and 85.

46 Lima, *Lina Bo Bardi*, 169.

47 Bruno Zevi, *Storia dell'architettura moderna*, (Turim, Giulio Einaudi Editori, 1953), 210.

48 Selvatico, *Scritti d'Arte,* 293.

49 Giambattista Vico, *The New Science,* (New York: Cornell University Press, 1948), 213.

50 Understood as "independence" from works from the past and from badly assimilated fashions. Bo Bardi, "Contribuição Propedêutica ao Ensino da Teoria da Arquitetura," 57.

Image Captions

Fig. 1. Left: Illustration and graphic work signed by Lina Bo at Bardi's article. Right: Graphic composition at Bardi's article. Pietro Maria Bardi, "Il Socrate dell'architettura", *Lo Stile,* L.15, no. 30 (1943): 7 and 11.

Fig. 2. Upper Left: Detail of wood joints in arches construction at Rondelet's treatise. Jean-Baptist Rondelet, *Trattato teorico e pratico dell'arte di edificare* (Mantova: a spese della società editrice, 1832-1840), Tav.CXVIII. Upper black and white images: Italian Faldstool from earlier 17th century, Italian *Sgabello* from the 15th century, Chinese Folding chair from the 16th century. All examples from *The Metropolitan Museum of Art* Collection, on Public Domain. Lower Left: Plywood Chair from *Studio d'Arte Palma*. Lina Bo Bardi, "Móveis novos", *Habitat.* No. 1(1950): 57. Lower color images: chair with brass orbit (1951), Giraffe chair (1987) and Friar Egidio's chair (1987). Nelson Kon Collection.

Fig. 3. Left: Piranesi Imaginary Prisons: The Drawbridge (1761), Princeton Art Museum Collection: "artmuseum.princeton.edu". Right: Sports Complex concrete air walkways at *Sesc Pompeia*, São Paulo. Nelson Kon Collection.

Fig. 4. Left: Botanical photographs: Salvia (1920) from Karl Blossfeldt. RijksMuseum Collection, on Public Domain; Middle: Louis Sullivan's drawing present at Lina's thesis; Right: Mandacaru flower made from concrete rebars. Edited picture from Nelson Kon Collection.

Fig. 5. Left: Windowsill attributed to Lodoli. Joseph Ryckwert, *The Necessity of Artifice,* (London: Academy Editions, 1982), 114-115. Middle: Photography of a 1930 Italian *facocchio*, said by P.M.Bardi to be similar to the ones mentioned by Lodoli. Pietro Maria Bardi, "Frei Lodoli e a cadeira", *Habitat.* No. 1 (1950): 52. Right: Jacques Cellier's sixteenth century drawing of Reims Labyrinth, also present at the cover and last page of Lina Bo Bardi's thesis. *Bibliothèque Nationale de France* on Public Domain.

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Biography
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Between a house and a museum:
Redefining an emerging ‘typology’ of exhibition

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Abstract

Since the twentieth century, the increase of house-museums has been explosive, transforming thousands of private spaces into a museum category based on domestic narratives. People visit these ‘museums’ to experience and perceive the lives supposedly encapsulated in these ‘houses’. Though, what is a house-museum? It is a house that has been museified or it is a museum disguised as a house? Considering these questions, the purpose of this research is to identify and analyze the constitutive elements of this apparent ‘typology’ of the exhibition, redefining this concept to understand it as an ambivalent space. The investigation decodes the concept of the museum to propose that placement, architecture, and objects of the house-museum define this typology as an apparatus through which desires are imposed. In their attempt to encapsulate reality, house-museums build fictional domesticity narratives sustained by the author's artistic production. In this way, house-museums are fantasy spaces that represent desires to their visitors from a domestic narrative.
To demonstrate this, the proposed methodology is to analyze three Chilean house-museums dedicated to poets that show different approximations to the ambivalence of this ‘typology’. The cases are Casa Museo Francisco Coloane, Casa Museo Isla Negra, and the possibility of Nicanor Parra’s house-museum. Is it a ‘house’ or a ‘museum’ in each case?
In this way, this text states that house-museums exemplify a paradox caused by the tension between its nature as a ‘house’ and a ‘museum’: they are neither houses nor museums, they are both at the same time. Sustained on fictional narratives dependent on their former inhabitants, the association of these terms produces a confrontation that blurs the spatial qualities and nulls the idea of a typology of house-museums. Hence, we can constantly redefine the boundaries of what is understood as a house-museum, suggesting a disruptive category that expands the traditional possibilities to exhibit cultural values.

Keywords: Nicanor Parra, Poets, Chile, House museum, Fantasy, Domesticity, Desire.

1. The house-museum as a construction of fictional domesticities

The increase of house-museums during the last decades demonstrate the intention of society to redefine the limits of heritage. Besides the monumental space of the classical museum, domestic space emerges as a platform to transmit cultural images. In this context, certain houses have been museified to consecrate an idea of domesticity that is influential to society.

In this way, at UNESCO's MUSEUM International newspaper, the museologist Giovanni Pinna stated that "the house-museum is fossilized ... These places cannot be modified or altered without falsifying history"[1]. Assuming an immutable narrative, house-museums propose the construction of fossilized domesticity, creating a coherent imaginary which is based on extolling components of the domestic. According to Pinna, house-museums are considered "highly evocative because not only does it contain objects, it also embodies the creative imagination of the people who lived and moved within its walls"[2]. House-museums renew the discourse of traditional museums, offering a fantasy experience that creates a link between the visitor and the former inhabitant of this domesticity.

Within this framework, the recent death of Chilean poet Nicanor Parra raised questions regarding the fate of his four houses[3], positioning them as possible scenarios for his 'anti-museum'. This idea, which was declared by the 'anti-poet' in his work *Las Bandejas de la Reyna,* would allow him to show the "universe where all of Don Nica's aesthetic sibylline is suspended"[4]. Given this intention, which elements define the domestic narrative of these possible house-museums?



Fig. 1

Nicanor Parra, self-called 'anti-poet', is worldwide recognized for his numerous literary publications. Nevertheless, the role of his everyday objects is essential to understand the intentions behind his artistic imagination. In this way, his *Trabajos Prácticos* (1969-2002) used objects from the author's domesticity, such as typewriters, chairs, and books, to generate an automatic reaction in the viewer through the recognition of these everyday elements. Consequently, the 'anti-poet' was constantly searching for 'cachureos'[5], accumulating a diverse selection of objects that was constantly moved from one house to another, while also adapting the spatial configuration of the houses to exhibit his collection. In particular, the houses located in La Reina (1958) and Las Cruces (1993) implicate an ambivalent scenario for the establishment of a house-museum. As his grandson, Cristóbal Ugarte states, "La Reina's [house] must be preserved as it is because it is a work of art in itself. It's my grandfather's legacy and it can't be extinguished. And Las Cruces' [house] can't be anything else than a museum because his grave is there"[6]. These houses embody the tension of the house-museum, problematizing the paradox of this apparent typology of the exhibition. While Las Cruces would consecrate a domestic space to turn it into a museum, La Reina would domesticate a space allegedly

understood as a work of art. Facing this situation, what is a house-museum? Should it necessarily respond to the binomial of a house transformed into a museum or a museum disguised as a house?

Freezing the houses and objects of Nicanor Parra doesn't respond to the author's narrative principles, thus questioning the definition of a house-museum typology proposed by UNESCO. In this way, this investigation reformulates the traditional concept of this category of the exhibition, understanding it as an architectural apparatus with the potential to propose new critical scenarios for the preservation of cultural objects. First, it is necessary to historically analyze what is a museum.

2. Redefining an emerging 'typology' of exhibition

The objective of museums, defined by the *International Council of Museums* (ICOM), determines that this institution "preserves, investigates, communicates and exposes the material and intangible heritage of humanity for education, study and recreation"[7]. Since the Enlightenment, the museum became a public cultural apparatus that presents abstract values of society through the construction of narratives, which are supported by specialists and demonstrated by the collected pieces. As sociologist Tony Bennett explains, "the importance of the formation of exhibition complexes was to provide new instruments for the moral and cultural regulation of the working classes"[8]. In this way, these narrations are constructions of reality created by power entities, defining symbols of national identity through these repositories of collective memory. Nevertheless, the crisis and reformation of cultural values initiated in the 18th century encouraged the inclusion of new typologies to preserve and expose heritage, giving birth to the house-museum.

Since its appearance in the 19th century, this apparent typology has exponentially grown. This, as Pinna suggests, is because house-museums "are used to conserve, exhibit or reconstruct real atmospheres that are difficult to manipulate"[9]. In these cases, private space is desecrated by the public sphere to fossilize a domestic narrative, meddling the culture of private life into the collective imaginary. However, these 'real' atmospheres rely on the fantasy of the house-museum, as fantasy produces an idealization of reality that presents an imaginary narrative as real. In this regard, the Slovenian philosopher Slavoj Žižek, states that:

"Fantasy is usually conceived as a scenario that realizes the subject's desire. … what the fantasy stages is not a scene in which our desire is fulfilled, fully satisfied, but on the contrary, a scene that realizes, stages, the desire as such. The fundamental point of psychoanalysis is that desire is not something given in advance, but something that has to be constructed, and it is precisely the role of fantasy to give the coordinates of the subject's desire, to specify its object, to locate the position the subject assumes in it." [10].

Fantasy constructs and presents desires, promoting the subject's impulse and feeling of affliction from something lost. At the same time, these feelings are projected onto an object that tries to compensate for this lack, attempting to fulfill the imposed underlying need. Consequently, we can suggest that house-museums are a fantasy space that presents desires built from the fiction of the domestic.

But not all house-museums are the same. In particular, certain houses from cultural heroes arise special relevance: literary house-museums. As the historian Linda Young explains, "the domestic function of the house fosters a feeling of intimately privileged connection between the visitor and the hero. Visitors are usually motivated by a drive for personal identification with the hero"[11], therefore the attractiveness of the house-museum lies in the visitor's desire to create a link with the author.

Based on this, the discursive differences between the museum and the house-museum are evident. On one side, the museum constructs a monumental history through a sublime space, collapsing time and history to instruct an episteme defined by power entities. On the contrary, the house-museum uses the domestic space to promote the visitor's identification with the author, allowing these fictional narratives to be absorbed as personal knowledge. This text hypothesizes that house-museums configure desires in their visitors following the suggested strategies. First, the author's domesticity is used to convey a manipulated construction of reality. Secondly, these domestic elements facilitate the impression of a connection between visitor and author. Finally, the visitor receives these stimuli, absorbing those pre-established thoughts as personal experience. In this way, the house-museum is an apparatus to present desires, which are fictionally incarnated through the author's domesticity. Considering this, which elements delimit this narrative construction?

Domesticity is defined by three constitutive elements: place, architecture – understood as a material form – and objects. Do these elements configure different approaches to the fiction of the house-museum? To analyze this, the chosen study cases exalt a specific component of the domestic, potentiating the connection of the author with his fictional domesticity. These examples present different objects of desire, using architectural space to stage fantasy and to configure dissimilar house-museums.

Considering the context of this investigation, it is relevant to analyze Chile's situation regarding this category of the exhibition. According to the data from the *Registry of Museums of Chile*, there are currently 34 house-museums in the country, corresponding to 10% of all museums nationwide. Although this percentage seems insignificant, 10 house-museums have been incorporated into this register during the last year. This suggests that the international rise of the house-museum is also taking place in Chile, which creates an opportunity for architectural exploration around this emerging typology.

To analyze these questions, this investigation examines three cases located in Chile. These authors personify an artistic scenario marked with cultural divergence, in which their houses are representations of their life and work. First, 'Casa Museo Francisco Coloane' is analyzed through it's connection to the place, where the correspondence between the work and the house-museum is consolidated by the imaginary of Chiloé. Second, Pablo Neruda's 'Casa Museo Isla Negra' is analyzed in his relationship with architecture, where the material forms allow a symbolic connection with the author. Finally, the possibility of a house-museum for Nicanor Parra is analyzed given the importance of objects in his work and domesticity. The purpose of this investigation is to decode a category of exhibition in proliferation, deconstructing the idea of a specific 'typology' of house-museums and generating an instance of discussion toward the generic transformation of houses into museums. House-museums exemplify a paradox caused by the tension between a 'house' and a 'museum': they are neither houses nor museums, they are both at the same time. In this way, using a binary structure limits the possibilities of house-museums, hence, this ambivalence should be accentuated to experiment with non-traditional ways to exhibit cultural values.

3. *Volvamos al mar*: The imaginary house of Francisco Coloane

Francisco Coloane (1910-2002) was a writer from Chiloé, distinguished for his narratives about man and nature in the southern lands of Chile. Because of this, the Municipality of Quemchi in Chiloé developed various projects to perpetuate Coloane's legacy, including the idea of a house-museum. However, the author's relationship with 'his' house is based on an imaginary construction, considering that the location, the building, and the objects were donations that never belonged to Coloane. In this way, this house-museum represents imaginary domesticity that preserves the traditions of Chiloé, using materials, architectural forms, and objects from their idiosyncrasy to connect the house-museum with Coloane's narrative intentions.

Francisco Coloane spent his childhood in Chiloé, a remote place surrounded by the ocean, winds, and tides. The writer attributes to this circumstance his connection with the sea, suggesting that he was born in a house-ship. In his text *Testimonios de Francisco Coloane* (1991), he states that "the house on stilts built by my father, on the eastern shore of "Isla Grande de Chiloé", looked like a real ship, with its bridges, its viewpoints and its kitchen that looked directly to the sea"[12].

However, in 1935 the author moved to Quintero, a coastal town in northern Chile, making his transfer definitive after the destruction of his house in Quemchi due to the 1960's earthquake. Despite this, the repercussions of his work were important for Chiloé's community, encouraging Teolinda Higueras[13] to perpetuate the author's legacy through the creation of his house-museum. This idea, sustained in the presence of the house and its surroundings in the author's literary imagination, was accentuated by various interviews made by Coloane. In particular, during his visit to Quemchi in 1995, Coloane comments "that his main interest [was] to be reunited with the memories of his childhood in Chiloé, [remembering] his house facing the sea in the old Yungay street"[14]. These narratives intertwine Coloane's domesticity with his literary work, creating the framework of a house-museum that presents the desire to perpetuate the traditions of Chiloé.

In 2000, Quemchi's architect Javier Paredes was assigned to reconstruct Coloane's house. The project consisted of making a replica of the original house through the investigation of bibliographic and testimonial material. Even though Paredes made the architectural drawings, the project was never executed due to financial and curatorial problems. Despite this, as Higueras explains, it was crucial to retake the initiative of a house-museum to celebrate the writer's centenary in 2010. Thus, her sister Yaneth Higueras donated a traditional stilt house and the neighbors donated typical objects of the area, while Quemchi's community carried out a traditional 'minga'[15] to finally inaugurate 'Casa Museo Francisco Coloane'.



Fig. 2

Positioned next to Quemchi's Public Library, the construction is a volume of two levels with a total surface area of 130 m^2. The structure is supported on stilts and the facade is covered with larch tiles. The distribution of the house-museum is the same as the original residential typology, where the rooms are arranged around the combustion kitchen. The plan is divided into three fragments, placing the circulation in the central space. The first floor contains the common use areas - kitchen, dining room, and living room - which are decorated with donated furniture and some of the writer's manuscripts. The second floor features the private use areas – bedrooms and studio - where Coloane's writing desk was recreated to overlook the sea. In this way, a regular house is museified to transform it into the writer's house-museum.

If this house-museum is compared with Javier Paredes' reconstruction project or with Coloane's narratives, disparities are found between these objects. However, those differences indicate this domestic fiction is based on the imaginary of the stilt house as Chiloé's cultural synthesis and it can be inferred that the morphology, spatial distribution, materials, and objects of 'Casa Museo Francisco Coloane' respond to the representative characteristics of southern Chile's architecture. Consequently, this house-museum constitutes a fiction based on imaginary domesticity that invents the house's relationship with the author and, in turn, consolidates the desire for a collective imaginary. Therefore, this cultural apparatus becomes an object of desire for the community, reverting Quemchi's isolation and turning it into a focal point of touristic attraction[16].

Leaving aside any criticism for this type of fiction, it is important to highlight 'simulation' as one of the strategies of the house-museum. By pretending to have what it doesn't and erasing the importance of authenticity, 'Casa Museo Francisco Coloane' museifies a house to represent Francisco Coloane's imaginary domesticity. House-museums can overlook referential values, focusing on the author's narratives to convey a connection with the visitor.

4. *Una casa en la arena*: The symbolic house of Pablo Neruda

Pablo Neruda (1904-1973) was a distinguished Chilean poet and politician. Although Neruda is widely recognized for his literary works, his role in politics and diplomacy gradually took on great importance throughout his life. As a participant and supporter of the Communist Party, his death during the rise of Pinochet's dictatorship (1973-1990) caused a lot of controversy and speculation. Considering this, when Chile returned to democracy, the newly formed 'Fundación Neruda' started transforming its properties into museums[17]. The situation is particular in Isla Negra's house-museum because Neruda devotedly participated in the construction of the house and it is the place where his remains are currently buried. Various authors argue that this house undoubtedly concretizes the poet's thoughts, understanding the materials, architectural forms, and spatial distributions as allegories that represent

his poetic intentions. Consequently, the house-museum has promoted the idea of allegorical domesticity, where his house symbolizes the longings for democracy promoted by the poet.

Although Pablo Neruda constantly traveled abroad, in 1939 he acquired a small cabin on ‘Las Gaviotas’, a beach later renamed by the poet as ‘Isla Negra’. This simple stone construction would undergo nine modifications between 1943 and 1973 under Neruda’s orders. The poet took control of the architectural design of the project, relegating the architect Germán Rodríguez Arias[18] only to the execution of construction drawings. Neruda changed the distribution, added material expressions to the construction, and molded the interiors with his objects. At this point, the poet's interest in construction is explicit, publicly declaring that, if he were not a poet, he would be a builder: he would make houses[19].

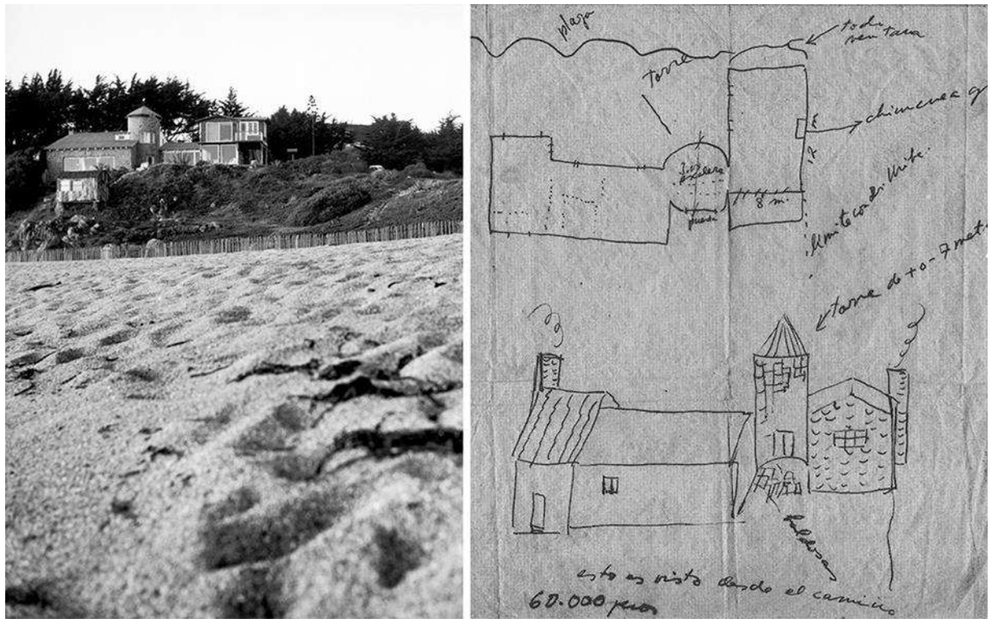


Fig. 3

However, this intention to build his domesticity seems to exceed the architectural form, turning this house into a literary theme for his book *Una casa en la arena* (1966). This publication, which includes photographs by the architect Sergio Larraín García Moreno, presents his house in Isla Negra through visual and discursive narratives. In different poems he describes the surroundings, architecture, objects, and co-inhabitants of the house, portraying a symbolic space that intertwines his lived experience with his political references. He constructs a narrative that suggests his domesticity should be interpreted under artistic logic because it is understood as the setting and extension of his poetry.

After Neruda died in 1973, the house was plundered by the military government, destroying and damaging the books, objects, and documents from the poet. Due to this, in 1986 his wife Matilde Urrutia established ‘Fundación Pablo Neruda’, an organization created to perpetuate the poet's legacy and protect his houses. Delimit a route, conceptualize the poet's spaces and define the elements of the collection were essential operations to compose the narrative of this house-museum.

Located by the sea, the house-museum has two separate volumes which are connected by a stone archway. First, the visitor walks through the additions made between 1943-1945 to the original volume, accessing the main saloon that displays figureheads and nautical elements. Then, it continues through the two-level tower that connects to the dining room. Next, there is a wooden hall with two levels: the master bedroom is on the upper floor, while the bar is on the lower level. Subsequently, the visitor walks out to the gardens to enter the second volume, circulating through the African mask room, La Covacha's study room, the library, the horse room, and the conch salons. The materials of these rooms combine primarily stone and wood, are decorated with objects treated in Neruda’s poetry. Finishing the route, the visitors access the gardens to reach the graves of the poet and his wife. Indeed, the circuit is organized chronologically, emulating the evolution of the house.

Visitors are incentivized to connect with the author based on an experience choreographed by the foundation.

In 1990, after the curatorial process where objects were selected for the exhibition and the poet’s library was recreated, the house museum was inaugurated. This inauguration represents a moment of political exaltation, especially considering its coincidence with the end of the military regime. Isla Negra’s house-museum builds allegorical domesticity that symbolizes the connection of the house and the poet, consecrating it as a device that transmits his desire for democracy. By settling, modifying, and placing this house as a theme for his work, Isla Negra becomes a symbol of an artistic approach that supports social struggle. Consequently, the fantasy space of this house-museum is constituted by architecture as a material register of Neruda's work and the operations dictated by the author and their connection to his artistic production idealize the house as a work of art, not just merely a home.

This house-museum operates in contradiction to Coloane’s house-museum. Instead of faking the relation between the house and the author, ‘Casa Museo Isla Negra’ mirrors the house through the poet’s narrative to validate its authenticity. In this case, the house is understood as space previously conceptualized as a museum by the author himself. Thus, this house-museum represents Pablo Neruda’s symbolic domesticity and presents another approach to this typology of the exhibition.

5. ‘Cementerio Clandestino’: Transfiguration through the houses of Nicanor Parra

Nicanor Parra (1914-2018) was a Chilean ‘anti-poet’ recognized for his literary publications and his *Trabajos Prácticos* (1969-2002). The latter is essential to construct the narrative of a house-museum, considering that these works highlight everyday objects through the connotation of language. Faced with suggestions that his domesticity is the backstage of his works, his houses are the scenarios for the proposal of a museum dedicated to the 'anti-poet'. Two of them - ‘Universidad de La Reyna’ in La Reina, and ‘Castillo Negro’ in Las Cruces - have become points of interest for this initiative.

On one side, La Reina’s famous cabin is a place where, according to his daughter Colombina Parra, "heritage must [stay] ... so everyone can have access to the way of working of one of the greatest of letters"[20]. Alternatively, Las Cruces’ popular coastal house, where Parra resided during the last decades, is consecrated because it holds the 'anti-poet' remains. These scenarios embody the tension between a house and a museum: while Las Cruces would transform a domestic space into a museum, La Reina would present an alleged exhibition space as a house. The future of these tenements depends on the elements that define their domestic fiction.

In 1958, the poet acquired his first house: a plot located in La Reina, Santiago. The wooden construction, called ‘Cattail cabin’, corresponded to a prefabricated one-level structure that condensed the domestic programs into a basic unit of 49 m^2. Between 1958-1960, Parra added a second wooden volume which was originally used as a warehouse. The structure was gradually modified, adding an extension designed by the 'anti-poet' and his daughter Francisca. This room, called ‘The Chapel’, was used to host multiple literary meetings. Subsequently, between 1970-1975, he added a housing pavilion designed by his sister-in-law María Isabel Tuca. Considering this, the original cabin was transformed into a dining room and kitchen area. Finally, Parra added a third masonry volume, called ‘Pagoda’, to create a library with his collection of books.

While the construction changed its morphology, the domestic spaces were named and adorned with collected objects, creating playful scenarios that he decorated with furniture from other times. In this regard, the ‘anti-poet’ defined himself as ‘cachurero’ – or hoarder –, stating that he liked to gather “ancient objects and also modern ones. For this reason, I have furniture and cabinets that I have obtained in antique dealers and demolitions and even have satellite antenna”[21]. Considering the influence of Einstein’s *Special Relativity Theory*, these inert elements have the faculty to be activated by Parra’s actions, restoring their life through their resignification. The ‘anti-poet’ explains this while referring to his work *La Mamadera Mortífera,* stating that:

“I have taken this principle to poetry ... For example, the only thing you could do with that bottle was to discard it as useless, but with the treatment, it is given, it radiates, releases energy. In other words, a ‘Practical Work’ is an object plus a reading, and that text is what triggers the energy and causes the explosion”[22].

Furthermore, the transfiguration of objects later leads to the programmatic alteration of their domesticity, naming the house as "The Open University of La Reyna"[23]. In this way, La Reina's domestic spaces are resignified, publicly declaring that his daily life must be understood as an extension of his artistic process. Nevertheless, Parra later emigrated to Las Cruces’ coast, a decision considered as a turning point for the author. Thereby, it is suggested that in Las Cruces the ‘anti-poet’ built a character in the likeness of his work[24].

This house, located in the upper area of Las Cruces, was a five-level construction covered with larch tiles. Alluding to its magnitude and its architectural qualities, it was named the ‘Black Castle”. However, in 1985 this structure was destroyed due to a fire, encouraging Parra to acquire the adjacent building around 1993. Las Cruces’ plot is divided into two sections: the housing volume and the 'castle' ruins. The residential program is concentrated in a three-level wooden volume, which corresponds to an archetypical coastal building bought – not built – by Parra. The second section shelters his emblematic Volkswagen car, the ‘castle’ ruins and the ‘anti-poet’ remains.

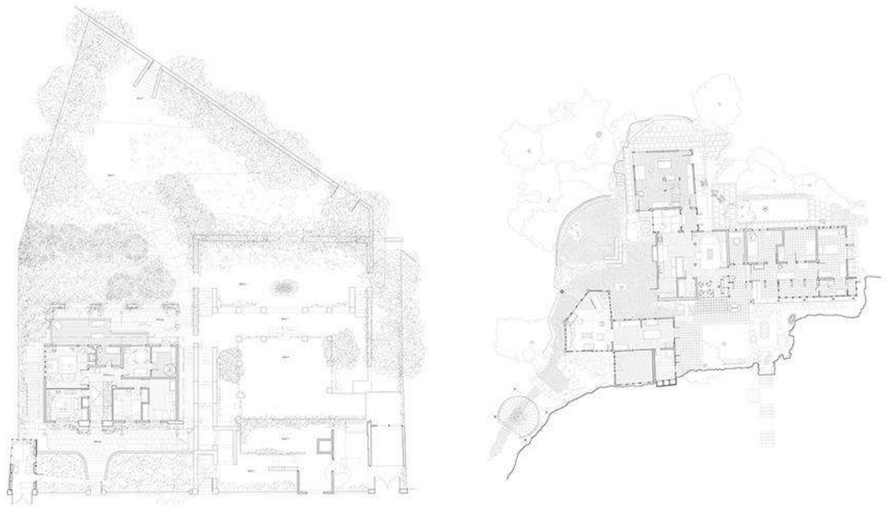


Fig. 4

Considering the different genesis of these architectural objects, Las Cruces seems to propose a divergent domestic narrative to La Reina. In the latter, fiction immerses the house within the logic of Parra’s artistic production, proclaiming this house as a remnant of his work. The objects, names, and buildings construct a fantasy space that consecrates these elements through the author’s figure. The remaining pieces are sacred because they could have been resurrected by the ‘anti-poet’. As Colombina Parra mentions, “a one-day stay at that university will change the course of our own stories and the stories to come”[25]. Diversely, Las Cruces’ narrative is triggered by the presence of the ‘anti-poet’, considering it was his residence during the last decades and his remains will perpetuate his stay there. Here, his figure consolidates an instance that, according to the funeral priest, inaugurates the “[celebration] of the resurrection of Don Nicanor”[26]. Therefore, the architectural remains and disused objects configure a fantasy space that is canonized by the author’s grave.

Parra’s fiction is sustained on a transfigured domesticity, where the houses transform the meaning of people and things to disclose their ‘true’ nature. As the anthropologist María Paz Bajas suggests about transfiguration,

“the [author] and the spectator dialogue through the work. The first transfigures the image in favor of his speech, aspiring to captivate the viewer and thus wrap him in his constructions. Likewise, the viewer, who sees the images as a sample of reality, triggers all his previous knowledge in the operation of understanding what he observes”[27].

In Parra’s case, this situation is enhanced by the relation between the author's work and his objects, supporting a fictional narrative where he’s able to resurrect elements. By introducing the desecration of death into the domestic sphere, Parra's desire to question the artistic canon is promulgated: death is ironically brought into daily life. Thus, it can be speculated that these houses become an object of desire that seeks to materialize the fusion between art and life

Moreover, while transforming the nature of ordinary objects, any operation to consecrate Parra's houses would be mired in this narrative and each house’s transformation would imply a different approximation to the house-museum. Considering the public staging of La Reina, this operation would

correspond to the domestication of a space proposed as an artistic symbiosis. Alternatively, due to the presence of the author’s remains in Las Cruces, this action would consecrate a domestic space as a museum.

A possible house-museum for Nicanor Parra embodies the dichotomy of this typology of the exhibition, which must incarnate the ‘anti-poet’s transfiguration principle to sustain his domestic fiction. Following this logic, any of their houses could be transformed into a house-museum, encouraging new possibilities for his houses in Conchalí and Isla Negra, which are currently forgotten by the public sphere. Providing a wide exploration scenario, these houses embrace different architectural operations under the formula of transfiguration.

6. Considerations on the desire of a house-museum

This investigation presents different ways of building fictional domesticities in house-museums. The established hypothesis is that house-museums create an object of desire to present narrative constructions to mass society. House-museums emphasize a component of domesticity - place, architecture, or objects - to structure a fantasy space related to the author's artistic production, which at the same time presents a manipulated reality to be absorbed by the visitors. From these domestic elements, the visitor has the impression to be connected with the author, projecting his subjectivity into the domestic fiction of the character in question. Finally, the visitor receives the stimuli presented by the house-museum, absorbing a pre-established narrative as an unparalleled personal experience. Architecture is essential to define the domestic narrative presented by the house-museum because it is the skeleton that sustains this fiction and the presence of the author's remains is an element that facilitates the narrative consecration of the house-museum.

The stated above is evident in the examples presented in this text. However, the possibilities to create fictional domesticities are endless. Firstly, Francisco Coloane’s house-museum takes advantage of the writer's relationship with Chiloé, creating imaginary domesticity through a typical stilt house where the writer never lived. Secondly, Pablo Neruda’s house-museum in Isla Negra exacerbates the poet's attraction to architecture, producing symbolic domesticity that epitomizes this scenario as an artistic symbiosis space. These cases show existing situations that embody the tension of the house-museum, establishing the debate between its nature as a house or a museum. This discussion is accentuated by analyzing Nicanor Parra’s houses in La Reina and Las Cruces, materializing the dichotomy of the typology within the same domesticity. Presenting opposite architectural resolutions, La Reina incarnates a museum and Las Cruces propose a house converted into a museum. If the investigation suggests that Nicanor Parra’s possible house-museum depends on his transfiguration principle, creating a narrative that resurrects and resignifies domestic elements, under which logic should we proceed? Faced with this, house-museums must infringe its representation as a house transformed into a museum or a museum disguised as a house, focusing instead on developing projects that channel each author’s fantasy by exploiting their unique fictional domesticity.



Fig. 5

The binary structure of the house-museum limits the possibilities of the architectural project. Simplifying their complexity, this dichotomist scheme only implies a question of proportion which cancels the possibility of conceiving those architectures as a “typology”. Even though the investigation revolves around this confrontation, this is used to pose a deeper understanding of the house-museum’s possibilities. For example, can a cemetery – or the house of the dead - be considered as a house-museum?

Sustained on fictional domesticities dependent on their former inhabitants, house-museums create objects of desire to present narrative constructions to mass society. Therefore, Nicanor Parra’s case scenario exemplifies a possible methodology. By recognizing the elements that create these domestic fictions, architecture can transgress the standard conditions of this category of exhibition. Hence, we can constantly redefine the boundaries of what is understood as a house-museum, suggesting a disruptive ‘typology’ that expands the traditional possibilities to exhibit cultural values.

Notes

1 Pinna, Giovanni. “Introduction to historic house museums”, *Museum International Vol. LIII*, no.2, 2001, p. 4
2 Pinna, Giovanni. “Introduction to historic house museums”, *Museum International Vol. LIII*, no.2, 2001, p. 7
3 These houses, which were acquired during Parra's life, are located in the following places of Chile: La Reina (1958), Isla Negra (1958), Conchalí (1969), and Las Cruces (1993).
4 Donoso, Paula. “Nicanor Parra Revisitado”, *Revista Paula no. 788*, 1998, p. 49
5 ‘Cachuero’ is a colloquial Chilean expression that refers to old or abandoned objects, often found at Flea Markets, and sold at cheap prices. Even though ‘Cachureos’ are considered junk, they also have affective value for being associated with a moment that is remembered with nostalgia.
6 De la Paz, Patricio. «Nicanor Parra: del taller al antimuseo». *Culto La Tercera*. Access, November 01, 2018, http://culto.latercera.com/2018/02/24/nicanor-parra-del-taller-al-anti-museo/
7 ICOM. “Definition of a Museum”. *ICOM.* Access, October 10, 2018. http://archives.icom. museum/definition.html
8 Bennett, Tony. *The birth of the museum: history, theory, politics.* (London: Routledge, 1995), 73
9 Pinna, Giovanni. “Introduction to historic house museums”, *Museum International Vol. LIII,* no.2, (2001), 4
10 Žižek, Slavoj. *Looking Awry: An introduction to Jacques Lacan through Popular Culture.* (Cambridge: The MIT Press, 1991), 6
11 Young, Linda. *Historic House Museums in the United States and the United Kingdom: A history.* (Rowman Nueva York: Littlefield, 2017), 33
12 Coloane, Francisco. *Testimonios de Francisco Coloane*, (Santiago de Chile: Editorial Universitaria, 1991), 16
13 Teolinda Higueras is the head of the Department of Culture and the Public Library of the Municipality of Quemchi since 1995. She has developed various projects to encourage cultural activities in the commune, among them, the project ‘Bibliolanchas por los mares chilotes’. According to Higueras, the house-museum of Francisco Coloane was important because "Quemchi needs to identify with his characters ... that is why it is so important to rebuild the house of this great writer who has made our people known in other parts of the world ... that is why I call the Quemchi community and all those who feel admiration for culture to participate in this project. Our people need it” at El Insular, “Quemchinos reconstruyen la casa de Coloane”, *Diario El Insular,* (July 19, 2002), 18
14 El Llanquihue, “Quemchi revolucionado con visita de su Ilustre hijo Francisco Coloane”, *Diario El Llanquihue,* (February 6, 1995), 23
15 A Minga is the typical Chilean tradition of moving a house from one location to another with the help of the community. This operation is mainly done in rural areas of southern Chile. The houses are put on logs by oxen or pack animals and later moved by boats through the water to their new location.
16 In this regard, in 1996 Quemchi’s mayor Heriberto Macías insinuated that "with his Illustrious Son [Francisco Coloane] at the helm, Quemchi wants to defeat isolation and become a stronghold of tourism in Chiloé". Punto Final, «Quemchi escribe a Coloane», *Diario Punto Final*, December 20, 1996, 10
17 Fundación Pablo Neruda has transformed all of his houses into house-museums. They are ‘Isla Negra’ (1990) in Isla Negra, ‘La Sebastiana’ in Valparaiso (1991), and ‘La Chascona’ in Providencia (1992). On the other hand, the house where he lived with the artist Delia del Carril, was also transformed into 'Casa Museo Delia del Carril’ (2019) by an organization created to perpetuate her artistic legacy.
18 Germán Rodríguez Arias (1902-1987) was a constant figure in the poet's life. Thus, Neruda commissioned him the remodeling of his houses in Los Guindos, Isla Negra, and Providencia. Rodríguez was a Spanish rationalist architect who founded GATEPAC, a group that sought to capture the ideals of the modern movement in Catalonia.
19 This is stated in an interview with the journalist Luis Ganderats in 1969: “(L. G.) You studied for four years the career of Pedagogy in French. If you hadn't chosen poetry as your way of life, would you have liked to be a teacher? (P.N.) I would be a builder. I would make houses”. Neruda, Pablo. “Neruda a lo humano y lo poético”, interview by Luis Alberto Ganderats, El Mercurio, April 20, 1969)
20 Cárdenas, María Teresa. “Orden del día: Recuperar la casa de Nicanor Parra en La Reina”. *El Mercurio*. Access, January 02, 2019, http://www.economiaynegocios.cl/noticias/noticias.asp?id=428957
21 Parra, Nicanor. “Nicanor Parra en La Reina: Estoy entre los ratones”, *Diario La Segunda,* (May 28, 1993), 3
22 Parra, Nicanor; Piña, Juan Andrés. *Conversaciones con la Poesía Chilena; Nicanor Parra, Eduardo Anguita, Gonzalo Rojas, Enrique Lihn, Oscar Hahn, Raúl Zurita*. (Santiago de Chile: Editorial Pehuén, 1990), 44
23 As his daughter Colombina relates, the ‘anti-poet’ suggested that attending school was avoidable: “This is the University of La Reyna” he told us and it was true. Many times he gave us topics and we had to look them up in the Encyclopedia Britannica. When Roberto [Parra's brother] got tired of walking in the city ... he started studying at La Reyna and received the lessons of the great professor ... The blackboards with equations were also another element of this university. Sometimes he sat us for hours in front of a blackboard to show us that the earth could be weighed. And he weighed it". Parra, Colombina. “Castillos en el aire”. *Archivo Nicanor Parra 1954-2004,* Santiago de Chile: Ograma, (2018): 26
24 In this way, when compiling various interviews given by the author, the poet Lucas Costa states that “his biographems work almost like artifacts. And they can be pure embellishment”. Costa, Lucas, «Duro de Roer», *Chanchullos. Parra antes de Las Cruces*, (Santiago de Chile: Alquimia Ediciones, 2014), 7
25 Cárdenas, María Teresa. “Orden del día: Recuperar la casa de Nicanor Parra en La Reina”. El Mercurio. Access, January 02, 2019, http://www.economiaynegocios.cl/noticias/noticias.asp?id=428957
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Image Captions

Fig. 1: Left. “Houses of Nicanor Parra: La Reina, Las Cruces, Isla Negra and Conchalí”, Felipe de Ferrari. Right. “Siga la flecha al antimuseo”. Nicanor Parra.
Fig. 2: Left. “Casa Museo Francisco Coloane”, Museos de medianoche. Right. “Project: Casa-Museo Francisco Coloane”, Chile, photography at El Insular, «Quemchinos reconstruyen la casa de Coloane», Diario El Insular, July 19, 2002, 18.
Fig. 3: Left. “Pablo Neruda’s house in Isla Negra”. Sergio Larraín García-Moreno. Right. Pablo Neruda, “Second drawing by Pablo Neruda for his house in Isla Negra”, s.f., drawing at Morgado, Patricia. «Stone upon Stone: From Pablo Neruda’s House in Isla Negra to “The Heights of Macchu Picchu», Traditional Dwellings and Settlements Review Vol. 22, no. 2 (Spring 2011): 33-48.
Fig. 4: Left. “General plan of Nicanor Parra’s house in La Reina”, Quite the opposite. Right. “General plan of Nicanor Parra’s house in Las Cruces”, Quite the opposite.
Fig. 5: Right. “Cementerio Clandestino”, Nicanor Parra. Right. “Nicanor Parra inaugurates his “antimuseum””, Rafael Vallvé, news at El Lider, Chile, November 09, 2004, Diario El Lider 10.

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Speculations on (Con)temporary Domestic Architecture

Politics, Domesticity, and the Irrelevance of Architecture in Two Rolling Projects

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Abstract

Pier Vittorio Aureli and Andrés Jaque have conducted a wide range of studies on domesticity. Even though with a very different approach (the former with a radical excess of conventions and the latter with a declared rupture of conventions), both of them share what seems to be the final acceptance of the irrelevance of the architectural object per se. Jaque and Aureli discuss architecture in terms of politics: as the locus for everyday politics and as the historical material evidence of politics within the city, respectively. Jaque has studied the openness of gay commodified domesticity as an as found condition, while Aureli famously celebrated monastic reclusion as an ideal rejection of commodified reality.
The comparison uses two projects that address a common problem. Office for Political Innovation's "Rolling House for the Rolling Society" understands the multiple scales at which space is affected, considering how online and offline environments coincide in domestic spaces. Meanwhile, Dogma's "Like a Rolling Stone" puts together realist issues of a generation that neglects conventional domestic living by virtue of contemporary working conditions.

Given the common "rolling" feature of the domestic space due to its nomadic use, the real transcendental gesture of both projects seems to rely on furniture as the locus for reproductive activities (sex and work), leaving the edifice as an irrelevant artificial common environment. Their representational approaches render their ideological differences clear, especially concerning the construction of the subject, in a political mediation between common and intimate spaces.

The comparison will build up with evidence on texts of both authors that elaborate on the topic of domesticity. The study's aim is to demonstrate how these architectural proposals promote an ideological critique of the everyday environment, even if this critique depends on very fragile elements that reject the conventional poetics of architecture.

Keywords: Domestic, Politics, Nostalgia, Radicalism, Sex

1. The domestic as political: the type against the topos.
In his essay "Polis=Oikos," Reinhold Martin starts by questioning if "political life [could] be described in properly spatial terms."[i] As the title of his essay suggests, Martin relocates the classical *locus* of politics by suggesting its topological repositioning, bringing the political to the utmost conventional everyday vicissitudes of the household, the 'private' realm of the *Oikos*. Along these lines, we can think of two contemporary practices that share a preoccupation in bringing the political to the domestic but in somewhat different approaches: Andres Jaque conceiving the domestic space as a piece within a more extensive political network, and Pier Vittorio Aureli, discussing the classical separation of private and public and the potential of the commons as a formal fracture in the contemporary domestic space.

The domestic as the space of political agonism and antagonism—rather than the assembly hall—has been acknowledged by Andres Jaque's Office for Political Innovation. Indeed, Jaque seems to be seeking an ensemble for a "Parliament of Things" with every project. Jaque has advanced several projects where he continuously pursues a deliberate presence of hybrid objects that shape in a 'parliamentarian' way the domestic, and for that matter, architecture. As employed by Andres Jaque, these hybrid objects become similar to the Quasi-Objects defined by French Philosopher Bruno Latour, inseparable from the social. In that sense, the Parliament of Things conceived within the domestic space considers objects as part of society and vice versa. According to Jaque, this move towards object-oriented politics breeds hybrid objects; in a way, architecture, according to Jaque—as an ensemble of objects, is social in itself.[ii]

On the other hand, in his canonical book, *The Possibility of an Absolute Architecture*, Pier Vittorio Aureli defines the relationship of architecture with politics relying on the classical notion of the Polis as the imminent archetypical political condition. For Aureli, not only is the differentiation of the Polis and the Oikos essential, but he is also interested in the physical differentiation of the public and the private: the very limits that allow separation become concrete. Ultimately, the archipelago notion—based on the Greek *nomos*—is Aureli's ideal schema[iii] that formalizes his position about the autonomy of architectural projects per se, which is immersed but opposed to the never-ending urbanization process.[iv]

For Aureli, the political emanates from the struggle between architecture and urbanization; for Jaque, the political enters the domestic, and domesticity is itself political and urban. In other words, the formal acknowledgment of politics allows Aureli to individuate architecture in *typological* terms. Contrarily, for Jaque, the notion of politics allows a multiscalar hybridization of architecture and politics that is only comprehensible through *topological* devices. However, despite the apparent difference in the use of politics, both have come to discuss possibilities of contemporary architecture through studies on domestic spaces. Again, these studies' approaches could be related to a clear differentiation between topological and typological methods. Take, for example, Intimate Strangers (2016) or Pornified Homes (2016) against Loveless (2019), or The Room of One's Own (2017). Jaque starts his research by looking at unconventional subjects—both in human and in thematic terms, to advance an alternative reading of the urbanization process that is affected both by nascent gender ideology and apps, or digital technology that allows non-physical communication, but that affects materially the domestic and the social. On the contrary, Dogma's research would set up a contemporary preoccupation retroactively engaged on historical precedents, trying to get as closer as possible to archetypal examples that illuminate a proposed programmatic and formal genealogy (Fig. 1).

These two dissimilar practices meet at a coincident point when they have confronted the same programmatic problem—programmatic in terms of social content: a house for the disenchanted post-Fordist worker.[v] Jaque's "The Rolling House for the Rolling Society" (2009) gives form to a condition that was already happening in Europe, where students, migrants, and tourists are forced to share flats in order to save money on housing. In Aureli's "Like a Rolling Stone" (2016), the project seeks to provide low-cost boarding housing in London for the emerging entrepreneur, who has been forced to renounce conventional family standards and needs temporary autonomy without having achieved a fully-fledged economic activity yet. What is striking is that even though these two offices have diametrical opposed intellectual positions, both coincide in coining the "rolling" metaphor to refer to a contemporary condition of social rootlessness; this would arguably indicate that the phenomenon that triggers the architectural proposal, in terms of its social content, is pretty much the same. The objective of both projects is to ameliorate, or at least to account for, the conditions of the actual subjects under contemporary post-Fordist forms of production, which according to Paolo Virno, are characterized by their instability and their unlimited agency; in short, as hyper alienated rootless subjects.[vi]

While Jaque's project fully accepts the topological as-found conditions of rolling housing in a diagrammatic manner,[vii] "Like a Rolling Stone" comes with a historical and typological study of the boarding house.[viii] The project itself is atypical to this genealogy since it is based on a prototypical prefab solution. These prototypes are located strategically (but not topologically) "[retracing] a constellation of possible sites around the Crossrail line, cutting an east-west section to London and touching upon very diverse urban conditions." Nevertheless, Dogma avoids topology as a defining and conscious theoretical strategy, which might be coherent with Dogma and Aureli's radical dissociation with the post-critical scene, or at least with any resemblance of it. Their radical rupture with the disciplinary conventions that evolved from the 1990s onwards—mostly the ones following by the digital turn—is well known, and it implies an evident return to historical codes. This coincides consistently with Aureli's preoccupations on the abstract and separation, the celebration of monastic life as ideal retreatment from consumerist society,[ix] while at the same time promoting the possibility to abstractly isolate architecture from the Polis as the only way to fight within and against capitalism. Nevertheless, radical separation might imply limited answers to complex questions, and consistency does not mean coherence.

2. Between the sublime and the capricious, or about tombs and bathtubs.
Dogma's negation of the coding of the XXI century predominant architectural explorations have relied on a direct operative interest in architectural history. Dogma is trying to save architecture from technological corruption—or algorithms, postscripts, and parametrization—by re-engaging architectural autonomy to political concerns. In "Like a Rolling Stone," the latter has been proven to be the means for autonomy; that is to say, politics is a way to separate architecture formally as Oikos with the city as Polis. Nevertheless, if the commitment to politics is formal, the disengagement with technology is pragmatic. "Like a Rolling Stone" presents a vicious proposal towards contemporary technology, almost eliminating any trace of the omnipresence of digitalization as part of everyday life. Concomitant to its techno-rejection, Aureli's project dwells on modernist poetic of the generic tectonics.

The prototypes of individual dwellings in Dogma's project are presented as prefabricated units, which attach to a generic steel structure built on-site that is yet again given as a modular assembling of prefabricated pieces. But in spite of the different geometrical specificities of the sites selected along London's Crossrail for the urban proposal, the base-structure alters just in its longitudinal dimensions, and the prefabricated units remain unaltered—aiming at a square with a central courtyard as the ideal base-structure type.[x] Thence, the proposal negates any possibility of alteration for the sake of a rational correspondence with specific and diverse sites—or it is reluctant to parametric optimization. Its minimal structure coincides with the minimal space for essential everyday activities: the dimensions of the individual units are based on the dimensions of a double size bed plus storage on both sides, and the generic base structure adds a minimal extra space for use and circulation (plus a perimeter sofa at the interior of the façade, which coincides with the structure's width). The 'rational' measured interior, as opposed to the large unstoppable (ir)rational interior of Jaque's non-stop Rolling House, is reinforced with the neglect of techno-utopia: a rational techno-nostalgia (Fig. 2).

As asserted by Jaque, "The Rolling House for the Rolling Society" accepts that "there is urbanism without exteriors that cannot be confined within the limits of any city. With a human population and objects marked by constant movement, it is urbanism built with interiorism technics."[xi] Hence, the project recognizes a condition already foretold by techno-utopian views of the '70s, and it engages with it not ironically but pragmatically. For Jaque, the infinite interior promoted by digital technology communications and the relatively simple way to travel among European cities equals a kind of utopia already latent in the territory. Henceforth, the non-stop urbanism of ubiquitous communication and continuous, seamless interiors relies on infrastructure. Still, the project attempts to reveal hidden facts within the systems' logic itself, to reveal it and make it questionable. In fact, the project itself gives form to new social conditions promoted by a highly interactive European society that before the pandemic relayed on the internet to expand any frontier. However, the project takes this existing feature to reveal it and increase the tensions already present in improvised collective temporary housing. Therefore, it is fair to say that the preoccupation of the infinite interior adds to a Situationist-like reading of the possibility of utopia in the infrastructural means of communication of the existent territory; nevertheless, this utopia does not aim for irony or mere positivity, but for controversy.

If there is a trace of utopia, it has nothing to do with a radical change in society at large but in an attempt to activate this infinite interior politically. Thus, Jaque takes the ordinary hybrid aspects of everyday life in temporary houses, including objects, technology, and social situations, and assembles them in a conflictual way, as a collage that, through Détournement, deviates the original use and meaning of objects. The project develops as an assemblage of dissimilar objects that are arranged spatially. The basic unit of this collage is the personal space that is formed by lightweight

compartments that can be entirely opened or closed—resembling the typical tent that adds to street-level stores. These individual units are organized around a nucleus of communal activities, which is a highly decorated core that intermingles exposed mechanisms and domestic artifacts; suddenly, everything becomes one charged bulk of decorative/useful elements. These domestic units can be aggregated vertically in an unapparent structural rigor; the tower seems to be purposely presented off-centered, with the personal tents hanging from the structural nucleus. The tower gets more crooked as it grows higher, and more extensive communal programs appear and interrupt any possible regular sense of aggregation, contributing to its random and unsteady whole image. Hence, the object struggles to show itself as a topological aggregation with uncertain outcomes (Fig. 3).

The role of collage in Jaque's rolling project is not only a surrealist act of displacement, but it is also an overemphasis of the as found, as to render clear and emphatically that his architecture depends on ordinary objects more than in conventional architectural conventions. These *objects trouvés* are not only displaced from their original context, which in the case of the rolling house only means to displace them topologically to non-conventional places within the domestic space—like a bathtub on the center of the communal space, but it also means to enlarge their normal functions, i.e., a bathtub that not only is displaced from its conventional place (the bathroom) but that also functions as a water filter that continually invigorates domestic plant pots with a hose system. In the end, every large or small object is part of a domestic assemble "activated through political forms of decoration."[xii]

However, strangely enough, Jaque's collages in a way resemble Giovanni Battista Piranesi's critical attitude towards the excesses produced by the advent of pure arbitrariness of late Baroque, or at least partially. Not only the apparent reference to *horror vacui*, but also what Manfredo Tafuri notices when Piranesi enlarges "some architectural particulars, accessories, or work tools, which, extracted from their context, often assume the appearance […] of surrealistic objects trouvés."[xiii] If we take out the moral and disciplinary underlines of Piranesi, we can also say that Jaque's rolling project constitutes, just as Tafuri refers to Piranesi's Carceri, a "systematic criticism of the concept of place," a truly (and not only) metaphorical architecture of *Heterotopia*.[xiv]

This improbable coincidence becomes evident in Piranesi's "Carceri d'Invenzione." As in the case of Jaque's "The Rolling House for the Rolling Society," there is pure infrastructure flooded with mechanical objects: the incessant roman ruinous vaults of Piranesi correspond to Jaque's metaphorical infinite (physical and virtual) interior that relays on global infrastructures. Both negate canonical forms of architectural language and constitute an endless background for the victory and decadence of the artificial. Nature (including humans) are minimal but enter as a corruptive matter, as making their way through ruins, becoming almost ornamental motifs. Of course, the victory of artificiality means the unintelligible mixture of nature and the artificial, not the loss of nature, but the loss of the purity of the artificial in itself: the loss of demarcation. This hybridization—of artificiality becoming the new natural and paradoxically incorporating nature as corruptive matter, makes decoration (which now includes everything that is not infrastructural) the bizarre protagonist in terms of its prevalence over conventional architectural elements.

And here lies the ultimate object of design and desire. Once the infinite infrastructure has turned the common edificatory problems obsolete, ornament in itself acquires a new transcendental dimension. And once again, the strange coincidence of Piranesi and Jaque demonstrate in plenitude the individuality of decoration as a synthesis of not only pragmatic problems but also of the sublimation of architecture's symbolic nature. Comparing Piranesi's altar of San Basilio in Santa Maria del Priorato sull'Aventino church in Rome with Jaque's central bathtub in his rolling house, it becomes evident their formal coincidence in functioning as isolated objects that produce "a deliberate fractioning of the spatial continuum of the organism."[xv] Moreover, just as Piranesi's altar increases its theatricality by virtue of its isolation, Jaque's bathtub is promoted as the central ornamental piece, which will come to full terms once a hypothetical voyeuristic shower is consumed. We can only imagine the bathtub fully functioning; the sensual act of taking a bath would become part of the decoration, reminiscent of the Piranesian San Basilio with his angels (Fig. 4).

While San Basilio coincides figuratively and formally with Jaque's bathtub, it is the backside wherein Piranesi's secular intentions become evident, and according to Tafuri, the premonition of the transcendental phenomenological role of architecture is declared.[xvi] Therefore, while Jaque's Rolling House could be described as an *architecture parlante* of Heterotopia since its hybrid hyper-decoration announces engagement with *the others*—the marginalized aspects of architecture and society in a general sense;[xvii] on the contrary, San Basilio constitutes the double object that on the front shows off irrationality produced by the excess of decoration, and on its backside, the possible way out of this irrationality, though anticipating other forms of the irrational. In other words, the altar's "muted'

backside accepts that architectural language is dead, but that in death, it will encounter new life: the transcendence of 'pure' original language and pure primordial experience in the *sublime*.

It is no coincidence that the *purification* of architectural experience along with references to death as the primary source of a transcendental encounter, which might also be true for Aureli's "Like a Rolling Stone" project— even though Aureli rejects any phenomenological affection: Under this light, the repetitive personal units resemble uncannily pharaonic tombs. In the end, the individual chambers in "Like a Rolling Stone" sublimate the role of the irrelevant frame in which they reside; they assume the transcendental symbolism of the house/tomb, unable to hide its phenomenological pretensions: *architecture parlante*, in this case, has been reduced to enlarged phenomenological furniture (Fig.5).

Even though Dogma has embraced the project from the point of view of economic justice for the post-Fordist worker, the project reduces the problem to a lack of specific housing type, solved through a pure (architectural) *event.* Indeed, Dogma portentously claims that "the moment has come to put forward an architectural alternative to the existing models on the market," which results in an absolute "act, perhaps, of realism, against the ideology of the domestic which our generation neither can afford nor desire." In other words, the problem that instigates the architectural proposal (the lack of appropriate housing for the post-Fordist worker) is the settlement of an existential void, and it acts as the backdrop for the birth of a new transcendental object (the single young worker housing type). However, this does not imply resistance to the way architecture engages with market logic—let alone the way subjects relate to it, but instead, it constitutes an alternative that, even if ideologically charged (against capitalism), is ready to engage in the system's cog.

The sublime can conceal and even make undesirable conditions seductive, especially for enlightened architects that despite the uncomfortable factual circumstances of the minimum space inside the chambers of "Like a Rolling Stone," should recognize the pure encounter with the abstract aesthetics of architecture. As Slavoj Žižek refers to the functions of phenomenology, "instead of intervening into reality, [it] just lets things appear as they are." Poetic forms validate pure event over actual content, showing, in an extreme circumstance, "no incompatibility between brutal terror and authentic poetic spirit—they can go together."[xviii]

3. Between Nostalgia and Radicalism.

Jaque and Aureli stand at opposite sides in a dialectic relation; both of them recognize the little agency that architecture has in changing the world, and they have sublimated architectural problems to more modest aims—activating politically architectural practice—but with different means: giving form to the political activation of the interior in "The Rolling House for the Rolling Society," or asserting a new housing type for a specific socially neglected user in "Like a Rolling Stone." These projects ratify that the political problem is an aesthetic one. We have already discussed how these two projects posit two different political narratives that define each project's nature. However, we can try one last interpretation, understanding their different aesthetic approaches when providing two distinct narrative forms. These two narrative forms resemble what Slavoj Žižek discusses as exemplary opposed poles of excess in the narrative when comparing what he calls "the standard melodrama" with Lars von Trier's film "Breaking the Waves." He uses these opposed examples to differentiate the way content emanates out of form and vice-versa, since "in both cases, we are dealing with a tension between form and content, but in Breaking the Waves, the excess is located in the content (the subdued pseudo-documentary form makes the excessive content palpable), while in a melodrama, the excess in the form obfuscates and thus renders palpable the flaw in the content."[xix] If we think of content as conventional architectural tools, the reminiscence of the projects we compare with Žižek's description is not casual; we have two excessive narratives that try to make a declaration about architecture. Indeed, both projects have been described by the authors in manifesto-like texts.

In more extensive terms, Dogma's approach is very similar to Lars von Trier's; both assume an intellectual content excess, operating within self-determined *dogmatic* constrictions that can be evident in representation technics. However, the tom-like house in "Like a Rolling Stone" might match another von Trier's film: "The House that Jack Built." The tension between extreme seriousness and satirical content is present in both the architectural project and the movie—not to mention Jack's obsessive search for the archetypical house as a contemporary Loosian proposal. The final scene demonstrates the movie's ultimate weakness: the house/tomb no longer emanates the Freudian uncanny, but it is uncanny in itself, a house made of corpses as the ultimate kitsch saturation, as a tautological archetype.[xx] Hence, the excess of content ultimately leads to kitsch and morbid saturation. Is this scene just one step further from the tomb/house in Dogma's rolling project, which balances (unwittingly) between irony and seriousness, just like the entire plot of von Trier's film? Perhaps it is no coincidence then, that Rem Koolhaas, the champion of content-excess, has (re)turned to Dogma-like

representations for renovating, in phantasmagorical retrospective visualizations, his blatant neoliberal compromises.

On the contrary, in Jaque's case, to remain radical means a compulsion to repetition and continuous renovation, just as the Freudian Eros, or the sex-drive impulse that evades falling in the primordial void of Thanatos; indeed, it is death drive that induces repetition.[xxi] So the acceptance of melodrama kitsch is paradoxically what keeps it floating without fully *becoming* architecture (as a discipline occasionally defined by certain rules); it is the prolongation of the transcendental rupture of the object trouvé modern avant-garde. The aesthetic becomes Eros, in a way prolonging the naivety before the fall into determinacy, suspending judgment between good and evil.[xxii] It is no coincidence that at the end of the manifesto-like declaration of Jaque's rolling project, he uses melodrama as a metaphor for the way the new parliamentarian domestic space would function. However, just as has been adverted by Enrique Walker in his manifesto requiem, "What happened to the architectural manifesto?" "The [melodramatic] manifesto ultimately condemns the project to be merely its illustration."

It seems that what happened to manifestos is that they have indeed, in the two cases analyzed, helped to put forward positions. Still, being aware of its cliché status, they have de-radicalized its content, presenting pure position with no real conflict and ultimately becoming unwittingly nostalgic. Although Jaque has demanded not to be linked with nostalgia, his rolling manifesto updates the 70's radical positions and inscribes a positive attitude mixing retroactivity with complexity and kitsch; the excess in narrative avoids opposing directly *in content* per se architectural positions: it has no declared enemies. On the other hand, even though Aureli has declared his historical allies and enemies in the manifesto "Architecture Refuse" declaimed in the Manifesto Marathon at the Serpentine Gallery in 2008, it ultimately becomes a nostalgic negative wish list. Aureli's manifesto was utterly at odds with the evident clichéd form of a marathon for manifestoes. The true radical position would have been a truly *"I prefer not to*"—especially considering the "no architect as biennale monkeys" and the "no nostalgia" claimed by Aureli. Nevertheless, this weird mixture of negation and engagement with the architectural establishment is probably a way to remain operative in a kind of servile virtuosity,[xxiii] generating not only resistance but also market-driven possibilities as a byproduct. Advancing coherent positions is not enough when radicalism has to be sacrificed.

As has been recognized by Felicity Scott regarding radical architectural practices of the '60s and '70s, they often, unwittingly or not, sponsored what they were opposing. In this case, the lack of radicalism accounts for a more operative purpose; these two projects engage in positions that can be related to radical paper architecture, but in their case, radicalism has to be suspended in favor of plausibility. By engaging in an operative disciplinary solution of the rolling problem—a home for the rootless contemporary worker and the contemporary immigrant—which the Real Estate market has overlooked, both projects perilously offer a product ready to be incorporated within market-driven logics. Nevertheless, it seems that the radical nostalgia and realistic language of Dogma's "Like a Rolling Stone" are more consumable since it makes the rationality of the prototype relatively easy and simple to be deployed; not to mention the seductive and sublime feature of abstraction as both a synonym of sophistication and as a consumption object—both within and outside the discipline. On the other hand, the leveling of unconventional objects at the stage of architecture, or the decorative multiscalar feature of Jaque's rolling house makes it more difficult to be deployed and consumed, since despite his design objects are radically new, they are not covered in phantasmagorical images of innovation. In "The Rolling House for the Rolling Society," no ordinary objects play their usual role, therefore making it purposely controversial but at the same time making it resonate with the current instability of prejudiced social conventions in general. While Aureli's proposes conservative objects to solve urgent contemporary problems, Jaque questions the architectural object's conventional purpose. While the first project claims to be a solution to contemporary capitalist forms of exploitation, it fails to oppose strategically the system that promotes it. Meanwhile, Jaque's project that focuses on giving a contingent solution to the rolling problem with ordinary everyday objects, paradoxically, cannot avoid reanimating the ghosts of utopia by virtue of the controversies it inaugurates.

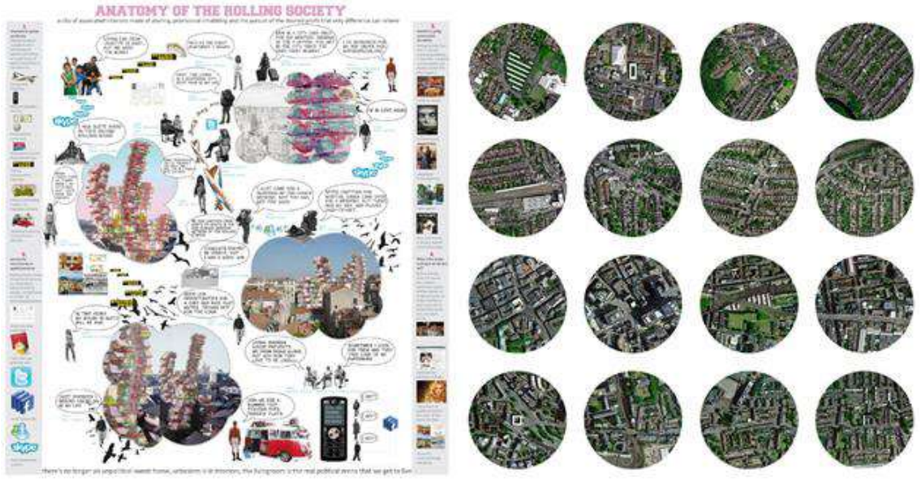


Fig. 1

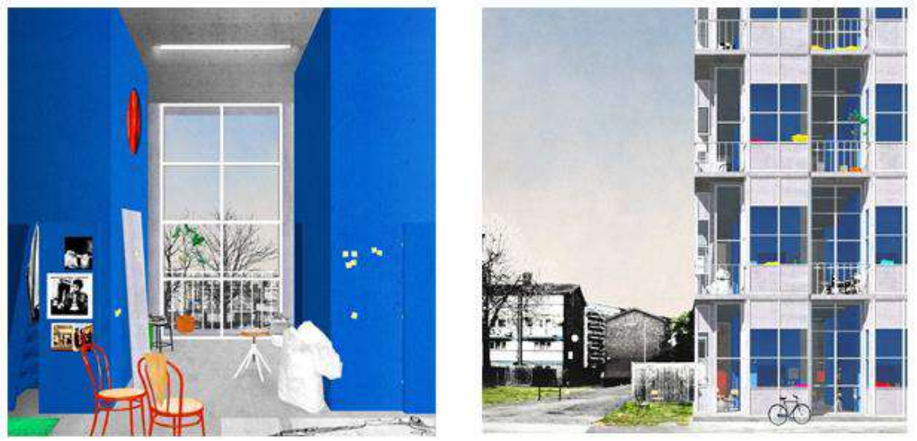


Fig. 2

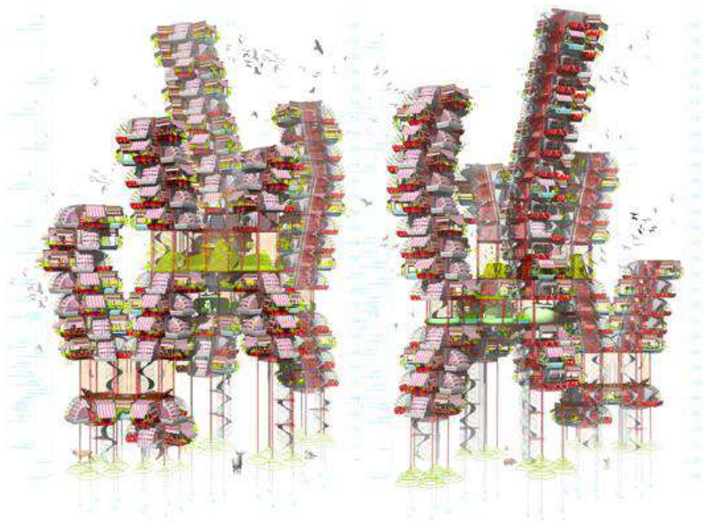


Fig. 3



Fig. 4



Fig. 5

Notes

1 In this essay, Martin argues for this new topology of the political which alters the conventional social engagement that challenges a historical male hegemony. In Reinhold Martin, “Polis=Oikos” in *The Urban Apparatus: Mediapolitics and the City,* (Minneapolis: University of Minnesota Press, 2016), Kindle.
2 See Andres Jaque, *Mies y la gata Niebla: Ensayos sobre arquitectura y cosmopolítica,* (Barcelona: Puente Editores, 2019).
3 See Pier Vittorio Aureli, “Appropriation, Subdivision, Abstraction: A Political History of the Urban Grid” in *Log* 44, (Fall 2018): 139-168.
4 See Pier Vittorio Aureli, *The Possibility of an Absolute Architecture*, (Cambridge: The MIT Press, 2011).
5 See Paolo Virno, “The Ambivalence of Disenchantment” in *Radical Thought in Italy: A Potential Politics*, ed. Paolo Virno and Michael Hardt, (Minneapolis: University of Minnesota Press, 1996), Kindle.
6 Ibid.
7 See Jaque, *Mies y la gata Niebla,* 15-30.
8 See Black Square and Dogma, *Like a Rolling Stone,* (Milano: Black Square, 2016).
9 See Pier Vittorio Aureli, *Less is Enough,* (Moscow: Strelka Press, 2014).
10 Black Square and Dogma, *Like a Rolling Stone,* 17.
11 Jaque, *Mies y la gata Niebla,* 24-25. My translation.
12 Ibid, 29. My translation.
13 Manfredo Tafuri, *The Labyrinth and the Sphere: Avant-Gardes and Architecture from Piranesi to the 1970’s*, trans. Pellegrino d' Acierno and Robert Connolly (Cambridge: The MIT Press, 1987), 53.
14 Ibid., 27.
15 Ibid., 48.
16 Ibid., 49.
17 See Michel Foucault, "Of Other Spaces: Utopias and Heterotopias" in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach, (New York: Routledge,1997), 330-336.
18 Slavoj Žižek, *Event,* (London: Penguin, 2014), Stop 5. The Three Events of Psychoanalysis, 136-153.
19 Slavoj Žižek, *Absolute Recoil: Towards a New Foundation of Dialectical Materialism*, (London: Verso Books, 2014), 2. From Kahn to Hegel - The Hegelian Move, Kindle.
20 The redundancy of the archetype plays a similar role to what Žižek describes as the ultimate kitsch if combining “Malevich and Duchamp in the same exhibit—to put, say, a (painting of a) urinal in a frame (black square).” in Žižek, *Absolute Recoil*, 2. From Kahn to Hegel – The framed frame.
21 Žižek, *Absolute Recoil*, 3. The Wound.
22 Ibid.
23 See Virno, “Virtuosity and Revolution: The Political Theory of Exodus,” in *Radical Thought in Italy*.

Image Captions

Fig. 1. Left, OFPOLIN’s diagram of the rolling society with objects and virtual mediums in a relational topological web. Right, Dogma’s selection of urban plots depicting different types of base structures.
Fig. 2. Left. Interior of Dogma’s base structures with prefab blue individual totems. Right, Exterior of the modular base structure.
Fig. 3. OFPOLIN’s crooked towers, showing communal spaces as interruptions where nature has overtaken architecture.
Fig. 4. Left, bathtub in the middle of common space of Jaque’s rolling house. Right, San Basilio altar designed by G.B. Piranesi.
Fig. 5. Sublime inside of individual totems in “Like a Rolling Stone.”

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The in-between practice
La Fragua and Previ by Germán Samper Gnecco (1958–1969)

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Abstract

Modern dualism has prevented us from understanding the contradictory relationships between the opposite concepts of private–public, inside–outside, or human being and the environment. Knowing how to articulate these polarities is a fundamental question for architecture and we can see a certain tradition following this aim in Gottfried Semper's theory of weaving, understood as a technical and symbolic principle of architecture, or in the in-between theory of Aldo van Eyck and Alison and Peter Smithson.

I intend to use this composite theory to analyze two projects by the Colombian architect Germán Samper Gnecco, who also persisted in articulating public and private space, and who can be seen as a participant in this circle of ideas. The relations between his architecture and the in-between theories are seen in the self-built neighborhood of La Fragua, built in Bogotá in 1958 and in the Previ contest for Lima, of 1969, in which van Eyck also participated. The theory is verified here in the architect's primary intentions, expressed in architectural drawings and early photographs of the built projects, where we can observe and compare the relationships that are woven together with the environment, and between the related concepts of the intimate and the collective.

This contribution is expected to be useful within the fundamental theory of architecture and helps to contextualize Germán Samper's architecture within a broader set of ideas. The in-between theory, which can also be related to the dual-ectics call for papers, is a possible way to help overcome the polarities of nature and culture, which make us blind to the environmental part of ourselves as humans.

Key words: In-between space, collective, individual, self-construction.

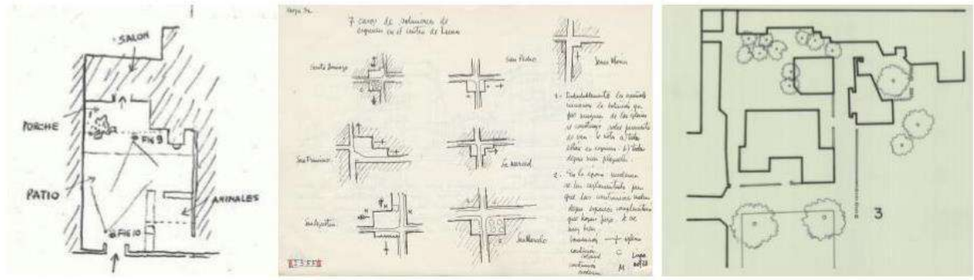


Fig. 1.

1. Architecture of relations

The In-between theory in architecture, although unfinished, seems more pertinent than ever. The in-between or intermediate refers to the space of relationship (*inter*) between societies and their environment (*medium*), which would be the domain of architecture itself. It could be said that the main objective of architecture is the construction of this relationship, or what some authors have called 'spatial weaving'[1]. In Ancient Greece, the concept of architecture, as shown by Indra McEwen, is related to the art of weaving, or that of adjusting, fitting, and articulating parts among themselves, in the manner of the carpenter (*tecton*). As the author explains: "A constituent as essential to the Greek home (*oikos*) as its home (*hestia*) was its loom (*histon*)"[2]. The works of Daedalus, the first architect in Greek mythology, are wonders or inventions, "automata, a labyrinth, and a *choros* or dancing floor"[3]. Afterwards, the word *daedalon* is also used for wonderfully-crafted and assembled objects, such as temples and houses, ships, armour, and fabrics used for various purposes. All of these artifacts, most importantly, fulfil the role of a cosmic representation for the people of Ancient Greece.

With reference to this principle of weaving, Vitruvius wrote in the second book that the first builders "planted pitchforks, and weaving the openings with branches, and covering them with mud, they formed their walls"[4]. Pursuing the same idea, in the 19th century, we find the German architect Gottfried Semper, and his theory of weaving as the main motif of architecture, and the first work of architecture as a rug[5]. In addition to the knot as a symbol of architecture, for Semper "the origin of art and architecture lies in the impulse of man to bring the structure of his world into an articulation and to sustain that world through embodied representation"[6]. In the same manner, the French geographer Augustin Berque describes the spaces inhabited by man, or *ecumene*, as a "fabric of ecological, technical and symbolic systems, which, beyond the limits of the physiological body, make exist, *ek-sistere*, (to be kept outside), the human being on earth"[7].

The idea of the intermediate is present in both traditional and modern architecture. Here, we will examine briefly the situation of Le Corbusier and the CIAMs, where Germán Samper was present from 1948 to 1953. Le Corbusier was making urban plans in India and Colombia, and this constant contact was increasingly reflected in his works, such as in the Maison Jaoul. Other members of the CIAM, like secretary Sigfried Giedion were also going in this direction. In the final comments of Bridgewater (CIAM VI) in 1946, Giedion states: "it became clear that our civilization is again withdrawing from the rational point of view"[8], and he suggested a reorientation with an emphasis on an "architecture of relationships"[9]. In Hoddesdon, CIAM VIII, 1951, the Dutch architect Jaap Bakema clearly establishes this main motif of architecture in his presentation *Relations between man and things*. For Bakema:

Every day we discover that the only thing that exists is relationships, and perhaps we can even say that the goal of human life is to become aware of the governing principles of a full life. This seems to be the reason why, in the development of spatial conceptions in architecture and town planning, we speak so often of continuity of space. For us in CIAM the relations between things are of greater importance than the things themselves[10].

This statement seems to come from one of Piet Mondrian's remarks that is also quoted in Aldo van Eyck's posthumous book *The Child, the City and the Artist*: "life is a continuous transformation, and the new culture is one of pure relations"[11]. The decisive moment for the In-between theory occurs in the CIAM IX in Aix-en-Provence in 1953, where Alison and Peter Smithson speak of the threshold, suggesting a theme that Aldo van Eyck would develop in many of his writings, and specially for the last CIAM in Otterlo, 1959[12] . In the "orientation"[13] written by van Eyck, as a guide for this final meeting, an "ecological approach"[14] was suggested for the selection of the projects. In addition, he also insisted that only 'ideal' projects were to be presented and vital issues in direct relation with a "total and particular habitat"[15]. A recurring idea in this orientation is that of 'association patterns' in

traditional cultures and that of a “greater awareness of meaningful relationships, as well as the ability to stimulate their expression through form”[16].

2. Samper and the in-between theory

The Colombian architect Germán Samper Gnecco arrived in Paris in 1948, thanks to a fellowship from the French Government, with the firm intention of working in Le Corbusier's atelier. Before being accepted, Samper met Rogelio Salmona, who had been working in the atelier for over a year and who also had studied at the National University in Bogotá. Salmona introduced him to the Greek architect Georges Candilis, and Samper offered to help him with preparation tasks for the CIAM in Bergamo, while he could also become familiar with the French language and its architectural vocabulary. After a month of work with Candilis, Samper was also accepted to the atelier.[17]

In June 1948, it is possible to see in Samper's notebooks the version of the grid prepared by ASCORAL (the French group of CIAM in head of Candilis), adapted to the Latin American situation. Taking the concept of *milieu* (geographical environment) as a starting point, Samper located Bogotá and Buenos Aires on a map of South America, with land, sea, and air lines of communication. In Le Corbusier's presentation for Bergamo, this concept of *milieu*, or environment was also adopted, but some considerations of the ASCORAL team were left aside, such as the idea that “the machinist society has disturbed everything”[18], and the concept that the medium is of an order at the same time “individual and collective”[19], which somehow announces this theory of the in-between.

Since Bergamo there was an interest in introducing notions of biology in the teaching of architecture and the writing of a "land act". The environment is associated with the concept of habitat, as stated in the *Chartre de L’habitat* from CIAM IX in Aix-en-Provence in 1953. Le Corbusier started to say that: “the congress is concerned with the distressing state of insufficiency of popular habitat”[20]. Afterwards he writes this definition:

(CIAM) understands by habitat the context in which Man must live and which permits him to satisfy all of his functions, his activities and aspirations. This context is not limited to habitations, it has to do also with the “extensions of habitations”. In other words, it is not only “architecture”, but equally “urbanism”. [21]

The ideas being discussed at the three CIAMs which Samper attended (Bergamo, Hoddesdon, and Aix-en-Provence), have a lot to do with his future projects. As he says: “I was fortunate to be able to attend these three congresses with few, but select participants, developed informally and where I was able to converse with Gideon, Gropius, Rogers, Van Eyck, Albini, Sert and many others.”[22]

Related to the understanding of architecture and urbanism as mediators of societies with their environment, is the search for an understanding of traditional ways of life, and the way they seek their “functions, activities and aspirations”, as stated in the *Chartre de L’habitat*. In addition to the participants of TEAM 10, in which the Catalan architect José Coderch also participated, there were other architects who would develop a vernacular modernity in parallel, such as Le Corbusier from the 30s onwards, Alvar Aalto, or later Ernesto Rodgers, Oscar Stonorov, and his colleague Louis Kahn. Many of them made trips to traditional non-Western places, such as the three trips the van Eyck’s made to the Sahara and the Dogon territory in Mali, which influenced his concept of the In-between realm.[23]

Germán Samper also used travel and drawing as architectural learning tools, but chose less exotic destinations. In his sketchbooks from the trip to Europe, he gathered more than 1,000 drawings, including furniture, objects from numerous art exhibitions and museums, classic, modern, and traditional architectures, and even a score the music of which he heard in Pisa, Italy[24] . When Samper returned to Colombia in 1953, he published an article in the *Proa* magazine, where he collected the lessons of his honeymoon trip to Ibiza and Mallorca, which took place in the summer of 1952[25]. In a subsequent interview he said: “Ibiza was for me the discovery of a simple style that linked Le Corbusier's revolutionary theories with a popular and traditional aesthetic.”[26] His text for the *Proa* journal begins: “the real interest lies in peasant architecture.”[27] Then he describes the landscape of Ibiza, dotted with white cubes and notes that “in contrast to these full prisms there always appears a porch or a closed patio, creating transitional spaces between the exterior and the interior.”[28] (see Fig. 1) As can be seen in La Fragua and Previ, later on, the patio will play a fundamental role in the configuration. Samper also notes that with the same elements this architecture achieves “unity and variety, two contradictory but necessary qualities."[29]

Before visiting Ibiza, Samper and his wife lived for two months in the town of Deyá, on the neighboring island of Mallorca. There, he makes drawings of all the components of this immemorial architecture, starting with the “silhouettes” or landscapes of the town and its surroundings, the olive groves, the sheep, goats, wooden chairs with cabuya backs, doors and hinges, windows, stairs, rooms, courtyards, lobbies, streets, ovens, fireplaces, kitchens, and towers. The house they inhabit, rented from a landlady named Magdalena, seems to give them invaluable lessons on water management. Samper later explains:

In the house where I stayed, of a simple peasant woman, where there was a toilet with a hole and a sink, but no shower, and in the relative poverty in which I lived, there were lessons in architectural aesthetics. I also remember, from my drawings, how they collected the water from the rooftops, it was sent to a tank under the house and then collected with buckets, pulled by a cable.[30]

In the same travel sketch, he points out that it is “José the bricklayer”, who explains to him that “the house begins with the water well”[31]; this is a great lesson in sustainability which was ahead of its time.

In a farming house outside Deyá, named Can Simó, Samper says that “the interest of this house is in the contrast of blocks A and B.” There were two adjoining patios, one of them open and the other covered with a pergola and its vine. In an aerial view drawn aside, the small patio can be seen to have access on all sides, which makes it a transition, an intersection or space in-between. Drawing the same house, he finally shows another contrast between the house and the architectural elements that compose it (A, B, C) and its surroundings as a final element (D).[32]



Fig. 2.

3. La Fragua, Bogotá, 1956–1959

The La Fragua project began in 1956, with the idea of Samper and his wife Yolanda Martínez, to make some “organized and owned tenant houses (...) with a maximum area of 30 m²”.[33] For a time, the initiative did not prosper although the help of various parties was sought. After his return from Europe, the architect had been hired by the ICT (Instituto de Crédito Territorial) and had designed the Muzú neighbourhood unit, two housing groups financed by the Banco Central Hipotecario, and a “weekend house” for Mr. Gonzalo Rueda, one of the founders of the first radio stations in the country: HJCK[34].
On 2 March, 1958, Angel María López, the family's driver, asked the couple for help in building his own house. They told him about the project they had in mind and they proposed to get other families to do something in a group, in what was popularly known as a *convite*. After 8 days, Angel María had already found eight families, who began to meet and work on the project on weekends. In the article published in Proa in 1961, Samper says that:

The building system known as Mutual Help and self-effort is as old as humanity. In this way all colonizations have been made. In our country, under the name of *mingas* and *convites*, many houses are built in the city and in the countryside.[35]

Samper goes on to say that self-construction is more popular than had been thought in Colombia. As he observed after the *World Housing and Planning Congress* held in San Juan, Puerto Rico in 1960, in the US “do it yourself” housing was equivalent to 17%[36]. The project received support from the Instituto de Crédito Territorial, whose director was the architect Francisco Pizano de Brigard, with a loan for properties and materials. It also received the support of CINVA, the Inter-American Housing Centre of the National University of Colombia, where workshops were held for the first 24 families that made up the initial stage. On 9 September, 1959, the pilot house was inaugurated, "which would serve as a model for the construction of the others, and later as a camp and warehouse for materials."[37] With the house constructed, a family moved immediately, and the warehouse had to be built elsewhere.

The urban approach to La Fragua begins with breaking up the monotonous row houses, to generate unity in variety. Paired houses rotate in different positions, allowing intermediate spaces to evolve. The houses create a protected space around three plazas of different sizes and shapes. The section of the road is tapered to reduce the entry of cars. In a drawing of the preliminary project, the sections between houses of 8, 5, and 3 meters can be observed (see Fig. 2). In the presentation of the project in *Proa* magazine, the distances stated between houses are 5 and 3.5 m. The composition in plan generates what we could see as a mat-building. According to Alison Smithson, a building of this type is recognized because:

Mat-building can be said to epitomize the anonymous collective; where the functions come to enrich the fabric, and the individual gains new freedoms of action through a new and shuffled order, based on interconnections, close-knit patterns of association, and possibilities for growth, diminution, and change.[38]

In La Fragua, the "anonymous collective" is found in the construction by mutual help and self-effort. This gives the inhabitants-builders, as Samper also points out, a greater degree of belonging and love for their place. The interconnection can be seen in the two or three entries with which these houses were provided (see Fig. 2). In an image published in the local press, from 1961, a boy can be seen carrying a cart and helping with the construction of his own house.[39] Possibly the idea of a child participating in construction is not politically correct, but it would be one more step in turning the child into a citizen, as van Eyck proposed:

The children exist in spite of the cities; the cities persist in spite of the children. Both survive, the children with, the cities without identity. If it were true to say that cities are meant for citizens, would it be true that they are meant also for children?[40]

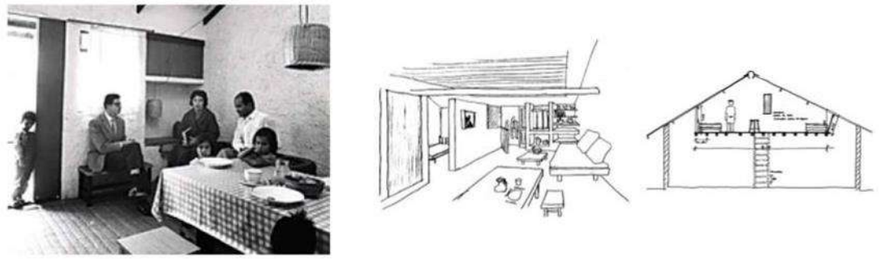


Fig. 3.

Photos published in *Proa* magazine also show some children sitting on the porch of the model home (see Fig. 2). After the urban interstices, this front façade is a second intermediate space, both outside and inside. The main door splits the façade in two, leaving a bench on one side and a tree pot on the other side, which is shared with the other house. A small window in the main bedroom does not appear to have been built. The houses also have an alternative access, to what was called the “back room”, a space that allowed families to dedicate some time to entrepreneurial activity.
Inside, Samper takes advantage of the breaks in the façade to install a library and a small living room (see Fig. 3). The furniture, as can be seen in the drawings, was designed and manufactured for the model house. No information has been found on the woven lamps, possibly made with traditional inverted baskets with a light bulb inside. The drawings also show that this intermediate space was also conceived with a door-window, which perfectly symbolizes this philosophy of the “doorstep”. The space above the room is a mezzanine configuring another intermediate space. This attic has connotations in the collective memory as a space for dreams and creation, although for Gaston Bachelard, in his famous book *The Poetics of Space*, it was mostly in the cellar that creation happened.[41]

The workshop space or “backspace” is a final intermediate space. We can refer again to the mat-building definition by Alison Smithson, because as she says, this building “allows freedom of action, association, growth, decline and change”. According to the images in Proa, this space was used as a workshop and a classroom. In the urban definition, these spaces are located towards the motorways.

4. Previ, Lima, 1968–1975
The Previ experimental housing competition, in Lima, Peru, launched by invitation in 1968, is proof that Germán Samper's architecture was in accordance with the ideas raised in the dissolution of the CIAMs. Samper's location within the competition grounds, next to Georges Candilis, could be another example of the closeness between these architects and their ideas. The contest was presented in a folder comprising 44 plates plus three unnumbered ones with perspectival views of the proposal and dated 1969. The urban approach seems similar to that of La Fragua, although here Samper starts from valuable lessons learned from Lima's historical stages dating from colonial times onwards. The first plate of the contest is an interpretation and synthesis of the contest call where socio-economic considerations are made, together with “Observations on the visit to Lima”[42]. The second panel presents the lessons and “conclusions on positive and negative aspects”[43] of the Lima neighbourhoods, “spontaneous or planned”[44] starting with the “typical Lima *corralón* of the working class.”[45] Samper says that although they have a low standard of living and other limitations, there is a sense of community life and common spaces for children. Then he observes the middle class Quinta for 60 houses, in the Paseo de la República 57-24[46], where he notes:

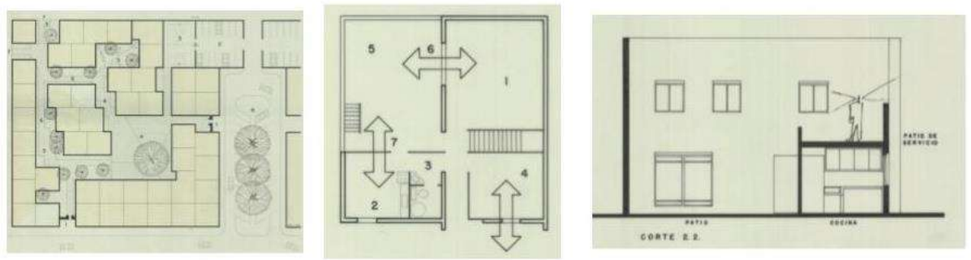


Fig. 4.

the care of common green areas, separation of pedestrians and cars, quiet life within groups, free home design, design of urban elements, adequate scale of urban spaces, and economy of roads.[47]
Continuing with his socio-spatial reading of Lima, Samper presents an analysis of an upper-class Quinta for eight houses grouped in Av. 20 de Julio and finally another of the Quinta Heeren, which “provided a local reference for the proposal”[48]. As can be seen, this is also an intermediate space, as are the Lima *corralón* and the middle-class *quintas* (see Fig. 1). The description of the Quinta Heeren in the memoirs of the contest is made in the manner of a lecorbusian script, five hand drawings of the villa show the journey through its outer space, accompanied by their respective description:
1. A door that encloses a space. Inside, several group homes.

2. Through a narrower entrance a central space is discovered.

3. Coexistence of 1 and 2-story homes with freely arranged trees.

4. Human scale of spaces. Ratio of built volume and open spaces.

5. Through broken parameters the spaces are closed discreetly hinting at a continuity.[49]

In Samper’s Lima Sketchbook, there are also seven cases of corner solutions in central Lima (see Fig. 1). In them, there is an equilibrium between the twin phenomena: circulation and resting space.

The first decision that the contest panels demonstrate is the choice of a square lot, both for the grouping and for the house plan. The argument starts from the fact that this figure is more flexible, "it admits four accesses, which gives more internal alternatives" and "it allows an infinity of grouping forms on all four sides."[50] In addition, the lots with a greater perimeter, it says, are more expensive. With square lots, multiple composition tests are then made, and five types of housing are designed, each with four internal variations in the arrangement of stairs, to generate 20 possibilities. As Samper says:

To achieve the grid, we start from the base of a square lot made up of houses with a regular layout on the periphery, leaving in the center a space that is freely occupied creating varied spaces.[51]

This generates a "residential group"[52] that starts from the roots of Lima's communal life detected in "the *corralones*, the middle and upper-class *quintas* and the reserved urbanizations."[53] More than a group of houses, what it is intended to generate is "a new concept of habitat", "a form of habitat ... appropriate to the formation of solidarity, to the creation of a community conscience”.[54]

The first intermediate spaces in Previ can be the two entry passageways to the block, which in their semblance to the Quinta Heeren, have an access portal. Unlike the Fragua, these are only two and they are controlled, in the manner of Lima. Inside, the broken parameters seen in the Quinta Heeren are applied, generating different intermediate but semi-public spaces, such as: “a) children's games; b) the main square: the heart of the main group; c) smaller squares; d) pedestrian streets e) communication with neighboring groups (optional)”.[55]

The access, as in La Fragua, is a first intermediate space. The facades can be painted and decorated with stripes on certain permitted ones, such as the *culatas*, or blind facades. Samper also foresees the use of traditional windows. Together with the possibilities of growth and design of the house, these features enable the free expression of each family in their own homes. The front door with its concrete cantilevered roof could be considered a space in itself; a hallway or a porch. In one of the typologies the house is accessed through a patio, while in others it is accessed through a corridor adjoining what could be a workshop, a store, or a space to rent. In the same way, for all types, access is mediated by an intermediate space, just as for all the patio is the heart of the house, or the Semperian hearth. This confined void allows for peaceful outdoor living, as well as establishing relationships between the patio and the main elements of the house, as the kitchen and living room (Fig. 4).

The final images in the memories of the Previ contest show a perspective of the living room and another of the central patio looking towards the kitchen (Fig. 5). In the first image we can see an almost typical Lima living-room apart from the dining chairs designed by Marcel Breuer. The corner dissolves with multiple shelves for ornaments and sets of paintings gravitate around it, which suggests another type of intermediate space of symbolic relationships with family life. The living room is organized around the television next to which there is a family portrait and there seems to be a certain pleasant balance between modernity and tradition. The image of the access patio to each house, as we saw, relates the main spaces of the house and its inhabitants with an indoor life in the open air. Above the patio there is a terrace or service patio, also in direct relation to its hearth, or central patio. This service terrace serves again as an intermediate, or transitional zone, to the most private parts of the house.

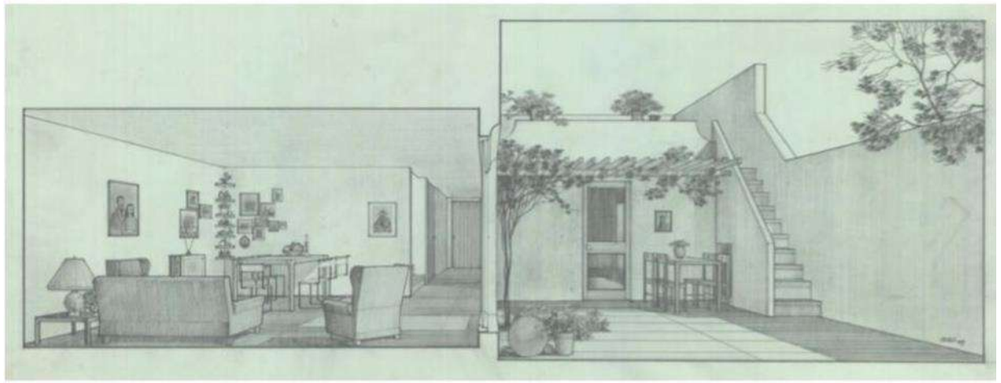


Fig. 5.

5. Conclusions

Although many differences are observed in both projects, these seem to respond to the general intention of creating a habitat, or a home in accordance with their social and natural environment. In both cases, the forms respond to a rigorous architectural analysis, something that can be corroborated by comparing the roofs of both projects: sloping roofs in Bogotá and flat roofs in Lima, as indicated by tradition and the rainfall of each environment. In both cases, we can also see the intention to gradually reduce the velocity of access to the homes, starting from the pedestrian passage ways, which keep the pedestrian separated from the vehicle. In each strategic point of this route, intermediate spaces are created to reduce the speed of movements and generate a mediation between the twin phenomena of individual–collective; circulation–stay; open–closed, nature–culture.

In La Fragua and in Previ, self-construction and free expression in the evolution of housing are perhaps original contributions by Samper to a theory of the in-between. We can recall a last definition of "the space between", as Alison and Peter Smithson called it, and which was a tribute to the work of Louis Kahn, and also the title of the third volume of their complete works. About this between-space Max Risselda says that:

In the Smithson’s work, the space between is also present in a metaphorical sense as a space that is left open for interpretation. It is a space that comes about through the confrontation of apparently different types of ideas and concepts, which are positioned practically unmediated in relation to each other, and therefore arouse curiosity.[56]

This type of in-between space is more evident in the Previ’s white walls or *culatas*, left for each dweller to paint with some the color they choose, but also in the interior perspective of the living room, with hangings and portraits organized in a rather spontaneous manner. All of this architecture, time has proven, has achieved the mediation between community and the individual. This is the contribution of Germán Samper and his team to the emergence of an in-between theory and practice.

Thanks to Yolanda Martínez, Catalina Samper, Tess van Eyck, Manuela Castillo, Ingrid Quintana, Maria Cecilia O’Byrne and Ricardo Daza, for their help.

Notes

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2 Indra Kagis McEwen. *Socrates Ancestor. An Essay on Architectural Beginnings*, (Boston: Massachusetts Institute of Technology, 1993), 2.
3 McEwen. *Socrates,* 107.
4 Vitruvius, *The Ten Books on Architecture,* translated by Morris Hicky Morgan; (Cambridge: Harvard University Press, 1914), quoted by McEwen.
5 Gottfried Semper, *El Estilo: El estilo en las artes técnicas y tectónicas o Estética práctica y textos complementarios*, trans. Juan Ignacio Azpiazu (Buenos Aires: Azpiazu ediciones, 2013). and Gottfried Semper, Antonio Armesto, *Escritos fundamentales de Gottfried Semper. El fuego y su protección*, trans. Manuel García Roig (Barcelona: Fundación Arquia, “arquia/temas 37”, 2014).
6 Mari Hvattum. *Gottfried Semper and the problem of historicism*. (Cambridge: Cambridge University Press, 2004) 71.
7 Augustin Berque, “Exister au dehors de soi: la demeure humaine”, Conférence Inaugurale—Chaudron 3: L’Extérieur, École Camondo, 12–13 September, 2019, (unpublished) 1.
8 Frances Loeb Library, Harvard University, The CIAM Collection, (1947: 6th: Bridgewater) [Folder B004], seq. 49.
9 Quoted by Sarah Deyong, “An Architectural Theory of Relations: Sigfried Giedion and Team X”. *Journal of the Society of Architectural Historians*. 73, No. 2 (2014): 226–247.
10 Bakema, Jaap. “Relationship between Men and Things” en: Rogers E. N., Sert J.L., and Tyrwhitt J. *The Heart of the City: Towards the Humanization of Urban Life*. (New York: Pellegrini and Cudahy, 1952) 18. Quoted by Francis Strauven, “The Dutch contribution: Bakema and van Eyck,” *Rassegna* 14, no.52 (1993) 48-57.
11 Piet Mondrian in ‘L’art nouveau et la vie nouvelle”, quoted by Aldo van Eyck, *The child, the city and the artist. An essay on architecture. The in-between realm* in: Lingtelijn, Vincent and Strauven, Francis (eds.) (Amsterdam, SUN, 2008) 30.
12 “There’s one more thing that has been growing in my mind ever since the Smithsons uttered the word doorstep at Aix. It hasn’t left me ever since. I’ve been mulling over it, expanding the meaning as far as I could reach it. I’ve even gone so far as to identify it with what architecture as such should accomplish. To establish the in-between is to reconcile conflicting polarities. Provide the place where they can interchange and you re-establish the original twin phenomena. I called this ‘la plus grande réalité du seuil’ in Dubrovnic” in Alison Smithson (ed.) *Team 10 Primer* (Boston: MIT Press, 1968) 91.
13 Aldo van Eyck, “Orientation”, in: Ligtelijn, Vincent and Strauven, Francis (eds.) *Aldo van Eyck Writings, vol.2: Collected articles and other writings 1947-1998* (Amsterdam: SUN, 2008) 190-191.
14 van Eyck, “Orientation", 191.
15 van Eyck, “Orientation", 191.
16 van Eyck, “Orientation", 191.
17 María Cecilia O’Byrne and Ricardo Daza, “El plan piloto visto por Germán Samper”, in: María Cecilia O’Byrne (ed.), *LC BOG. Le Corbusier en Bogotá. 1947-1951. Tomo 2. Precisiones en torno al Plan Director* (Bogotá: Pontificia Universidad Javeriana, ediciones Uniandes, 2010) 138-159.
18 Germán Samper, *Cuadernos de Anotaciones,* Cuaderno 1 (Germán Samper Archive) 16.
19 Samper, *Anotaciones*, 16.
20 Le Corbusier, “Presentation for CIAM IX”, Frances Loeb Library / Collection: The CIAM Collection (Aix-en-provence, 1953) seq.9.
21 Le Corbusier, “Presentation”, seq.9.
22 O’Byrne and Daza. “El plan piloto”, 143.
23 Aldo van Eyck. “Building in the Southern Oases.” *Forum*, no. 1 (1953): 28–37.
24 Germán Samper Gnecco, *Croquis de Viaje, Libro 1. Europa años 50,* (Germán Samper Archive) 87.
25 Germán Samper Gnecco. “Arquitectura en Ibiza”. *Proa* 81 (1954): 26–27.
26 Germán Samper Gnecco. “Los croquis de viaje y su incidencia en las obras de un arquitecto”, in: Marcela Ángel y María Cecilia O’Byrne (eds.), *Casa + casa + casa = ciudad. Una investigación en vivienda*. (Bogotá: Ediciones Uniandes, 2012) 43.
27 Samper, “Arquitectura en Ibiza”, 26
28 Samper, “Ibiza”, 26.
29 Samper, “Ibiza”, 26.
30 Samper, “Los croquis” 44.
31 Samper, *Libro 2*. 89.
32 Samper, *Libro 2*. 92
33 Germán Samper Gnecco. “Casas por mutua ayuda y esfuerzo propio en el barrio 'La Fragua” Bogotá'”, *Proa* 147 (1954):10.
34 Germán Samper Gnecco, “Proyecto para un centro comercial en el barrio Muzú, Bogotá”, *Proa* 78 (1954): 25-26; Carlos C., Arbeláez, Eduardo Pombo, Samuel Vieco, and Germán Samper, “Casas económicas en Cúcuta”, *Proa* 80 (1954):15; Germán Samper Gnecco, “Casa de fin semana”, *Proa* 90 (1955) 18–20.
35 Samper. “Casas por Mutua ayuda”, 11.
36 Samper. “Casas por Mutua ayuda”, 11.
37 Samper. “Casas por Mutua ayuda”, 16.
38 Alison Smithson, “How to recognise and read mat-building. Mainstream architecture as it has developed towards the mat-building.” *Architectural Design* 9 (1974): 573.
39 “La Fragua”, Germán Samper, accessed 9 september 2020, https://www.germansamper.com/la-fragua.
40 Van Eyck, *The Child,* 18.
41 “This worn-out metaphor is illustrated, in this instance, by countless cellars, a network of passages, and a group of individual cells with frequently padlocked doors. There, secrets are pondered, projects are prepared. And, underneath the earth, action gets under way. We are really in the intimate space of underground maneuvers”, Gaston Bachelard, *The Poetics of Space* (Boston, Massachusetts: Beacon Press books, 1994) 22.
42 Germán Samper, *Memorias del consurso Previ,* (Germán Samper Archive, 1969), plate 1.
43 Samper, *Previ,* plate 2.
44 Samper, *Previ,* plate 2.
45 Samper, *Previ,* plate 2.
46 Samper, *Previ,* plate 2.
47 Samper, *Previ,* plate 2.
48 Samper, *Previ,* plate 4.
49 Samper, *Previ,* plate 5.
50 Samper, *Previ,* plate 6.
51 Samper, *Previ,* plate 6.
52 Samper, *Previ,* plate 20.
53 Samper, *Previ,* plate 20
54 Samper, *Previ,* plate 20.
55 Samper, *Previ,* plate 21.
56 Max Risselada. “The Space between”, *OASE* 51 (1999): 52.

Image Captions

Fig. 1.
-Left. Plan of house in Ibiza, from *Proa* journal no. 81, 1954.
-Centre. Dibujo 2355, Croquis del viaje a Lima, 1968, Germán Samper Archive.
-Right: Quinta Heeren, Lima, Perú, *Previ contest memoires*, 1969. Germán Samper Archive.
Fig. 2.
-Left: La Fragua urban plan work drawing, from D. Samper (ed.) *Germán Samper*, 163.
-Centre: Model house in La Fragua, from *Proa* journal no. 147, 1961.
-Right: La Fragua house plan, from *Proa* journal no. 147, 1961.
Fig. 3.
-Left: Germán Samper and Yolanda Martínez during inauguration of model house, from *Proa* journal no. 147, 1961.
-Centre: Interior perspective of La Fragua; from *Proa* journal no. 147, 1961.
-Right: Section through house in La Fragua. from *Proa* journal no. 147, 1961.
Fig. 4.
-Left: Previ urban plan, 1969; from Samper, *Previ,* plate 21, Germán Samper Archive.
-Centre: Previ schematic house plan, 1969, Samper, *Previ,* plate 13, Germán Samper Archive.
-Right: Previ house section, 1969, Samper, *Previ,* plate 15, Germán Samper Archive.
Fig. 5.
-Left: Previ house Interior perspective, 1969, unnumbered plate, Germán Samper Archive.
-Right: Previ house Interior perspective, 1969, unnumbered plate, Germán Samper Archive.

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‘From one Louvre to another’:
Cultural Constructs of The Self Through The Other

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Abstract

This paper aims to explore the impacts of employing the Louvre Museum’s ‘universal’ brand on France and UAE’s national identity construction processes. The text looks into brand’s role in accommodating forms of cultural exchange between these two countries, and the use of museum’s collections as cultural capital by the UAE in establishing legitimacy for the new Arab identity and its national aspirations. Such cultural exchange programs expose the hardship of creating and maintaining a ‘natural dialogue’ between the two ends. While Louvre Museum in Abu Dhabi explores the ‘shared themes’ that aims to connect humanity, within a ‘universal’ museum format that showcases borrowed global artworks; Louvre Museum in Paris reflects a ‘certain’ idea of the world with its comprehensive collections of acquired items. The problem lies in their difference at forming of the ‘universality’ that insists on decontextualization as this causes a reduction of self’s capacity to both speak and be heard like pointed out by Spivak. Text questions the relevance of a universal museum and cultural exchanges that allow the ‘other’ to gain universal recognition in establishing an authentic identity. These two museums in that sense, are critical to compare and reveal the fabricated need for cultural dependency on the ‘West’ that is happening through the cultural exchange programs. It further highlights the embracement of othering as these exchanges are becoming an economic strategy instead of a cultural one for countries looking to gain acceptance and set a critical precedent within the region and world.

Keywords: authenticity, cultural construct, cultural exchange, ethic, contemporary architecture

1. Introduction

Museums have been closely linked to power structures and became an essential tool of identity formation practices by embodying its cultural capitals throughout the time (Loukaitou-Sideris & Grodach 2004). They were instrumental for authorities to deliver and communicate their core values and materialize their national identity (Alexander & Alexander 2008). Although the past perceptions of identity may seem irrelevant in today's transnational contexts, the idea of embodying cultural values through museums appears to resonate in GCC countries, visible by the increasing numbers of national museums. While some of these museums focus on representing a single and a uniformed narrative like Qatar National Museum, National Museum of Saudi Arabia, and Zayed National Museum, some others explore shared themes that inform and connect humanity in a universal museum. Through the 'universal' format, some established museums have had a chance to collaborate with some other countries to display universal value artifacts in places other than their own. As much as granting a broader audience to the promoter countries, this process allows the beneficiary countries to profit significantly by tapping into the resources of established entities to gain legitimization and acceptance at a broader level, as it happened with the universal Abu Dhabi Louvre Museum. Critique of the situation does emerge when this process becomes a tool for entities to carry out their political and economic objectives. The concern here is, then, to understand the impacts of using the brand Louvre and its technologies of representation in the form of a universal museum for UAE's activities to express and establish an authentic character when the name Louvre is closely linked with France's identity and history. It is essential to understand the universal museum's relevance to the identity construction process when it is difficult to neutralize the notion of identity to a single and unified concept. As museums filter through their country's ethics and politics and re(present) objects transitionally and transnationally in an inherently postcolonial way, it is crucial to consider the possibility of universal museums addressing the dilemmas mentioned above (Nora 1989).

The term 'universal museum' refers to the ten museums in North America and nine museums in Europe that have 'diverse and multifaceted' collections sourced from around the world, not only from the country they belonged to (Schuster, 2004). With the intention of a disservice to all their visitors, universal museums put together these collected items and associated artifacts in the universal museums. While it is inevitable not to maintain an individual perspective on these objects' presentation, they also uproot the items from their unique historical and geographical context. Above all, by resourcing these collections through cultural exchange programs or partnering, universal museums 'allow' visitors to view these artifacts through their filter of 'contemporary politics' and 'international relations' in various other locations and obtain a global status for their 'certain' views. In this sense, the recently completed Abu Dhabi Louvre Museum, which partnered with The Louvre Museum in France, evokes questions about employing a universal museum as an outlet for the national identity construction process. Embracing this 'certain perspective' by hosting (re)presentations of a questionable perception of the past (Burlingame 2014), UAE tries to enhance its nation's identity by promoting these particular views under the name of internationalism. It is crucial to discuss the possible impacts of such dialogues as the UAE tries to set a precedent primarily within the region and later on a universal scale.

2. From one Louvre to another

Drawing on the sources outlined above, museums allow people to reflect on their feelings towards belonging to a culture and place. Instead of a lived social relationship, museums can help people form a cultural bond through shared knowledge, representation, and symbolism (Anderson 1983). By employing the power of collective memory that links certain feelings to historical objects, cultural constructs define the perception of national identity (Renan 1998). By framing the ways of seeing, museums shape consciousness to form national attachment over time.

After the change in the perception of nation-state ideas starting in the 18th century, the concept of national identity transformed from a 'container' that accommodates the royal family's people to 'a public' of citizens. Through this transformation, museums became the place that can infuse these new ideas and gather people together by housing representations of the newly formed sentimental values (Macdonald, 2011). The appearance of the national identity and emergence of public museums at the end of the 18th century were closely linked to each other's existence. Transformations of private collections to public museums were symbolic to indicate what was once royal now became public. The Louvre's shifting into a universal museum came out of the political situations that shaped the country as a nation-state. Louvre, as a royal gallery, symbolized royalty and the idea that the nation belonged to the royals. However, Louvre as a public museum was a great indicator of the change that now the nation was the sum of public life and its people. Louvre became a tool for citizens to tap into their country's wealth in return for their adherence (Duncan and Wallach 1980). Regardless of these changes in the power structures, the Louvre's role was to excite and inspire its visitors and communicate these power structures' ideas. Museums were able to link collective personal memories to a shared concept of history by the objects that express a 'national identity' in a space surrounded by the particular technologies to represent this identity. By bringing items to display for its people, even if it meant through colonial activities, Louvre proved a sense of capacity for its government to power and control beyond its boundaries during these national identity construction times (Macdonald, 2011). Besides curating these ideas and sentimental values through artifacts, museums also represented stability and continuity in time with their 'immemorial forms.' This objectification of the culture through form and materiality allowed these sentimental values to be experienced, making these imposed ideologies and values felt 'real,' even 'factual' (Handler, 1988:14).

The museums' materiality and curation in that sense hold significant importance in shaping national values. When compared, although they share the same brand, the Abu Dhabi Louvre Museum design shows no resemblance to the palatial look of the Louvre in Paris. Designed by Pritzker Award winner Jean Nouvel, the museum building is an elaborate interpretation of 'medina,' a street typology found in Arab architecture. While the dominant palatial look of Louvre Paris represents a significant ray of historical forms and memories, Abu Dhabi Louvre aims to have a culturally-rooted form to affirm its authenticity. With this contextually sensitive design, the building legitimizes its entire existence as being ethical. Being no stranger to working in the other's lands, the architect addressed the building's aim to 'resonate' with its geographical and historical context and address its universality (see architecturaldigest/jean-nouvel). The museum also holds significant importance as it is the first one to get built from the five planned museums in Abu Dhabi's Saadiyat Island Cultural District as part of an emerging museumscape. Pritzker winner architects designed all of the five museums on this district, and the whole island is a big master plan devoted to the promotion of arts and culture, which puts Abu Dhabi's name into the global scene. In that sense, the Louvre Abu Dhabi is the first realized part of this grand urban vision and forms an experiential piece of its identity construction processes.

3. Museums: Othering and Agency



Fig. 1

Aiming to illustrate relatable experiences of a shared history beyond the geographical and ethnic differences through the landed artifacts from The Louvre Museum in Paris (see tamm.abudhabi/museums), the building embodies twenty-three galleries spaces situated under a great dome. The intricacy of this elaborate dome lets the 'rain of light' through the openings in its complex geometry, and the museum space becomes a stage for hosting the modern interpretation of dynamic shadow cast from the palm trees in an oasis that signifies UAE's native elements. Embodied symbolically and materially in this elaborate Arabic architectural form, The Louvre Abu Dhabi's program rest on twelve chronological themes that span across 'all historical periods' up to the present (see louvreabudhabi.ae/museum-galleries). Starting from the Museum's first gallery, the curation aims to build up a universal story with a display of objects brought together from across the world like masks, mother and child images, and writing implements that show similarity in a first instance. With no to little explanation on why and how

these objects formed and used differently in their different origins, the curation of this 'similarity' unfortunately works to decontextualize these objects and flatten the diverse background and cultural context they came out of (Hammond, 2018) (Fig. 1.). Museum's primary aim to celebrate diversity and encourage curiosity (see presse.louvre.fr/abudhabi) became redundant and transformed into a collection of similar images collected from the same time around the world in the name of universality. Compared to the Louvre Paris's nuanced collections that intensely focus on narrow time frames with complexity (Fig. 2), representations of objects in Abu Dhabi Louvre that come from a widespread timeline, reduced to 'an abstract identity' (Biln, 1997) of the culture and time they represent.



Fig. 2.



Fig. 3.

The continuous experience of observing the items in another object's coexistence (Fig. 3.) indicates the derivable and reducible values of the displayed objects. By seeing the prioritization of the particular objects or the cultures, this self-constructed "centering" of the Louvre brand almost immediately notifies the visitors and 'lock' the borrowed items on display in a closed discourse of sameness (Spivak, 1987; Biln, 1997) according to a self. According to Spivak, the identities and the values attributed through these objects on display are social and shaped by specific contexts. However, people have the agency's ability, which makes this discourse of identity exchange between positioning and the agency. In that sense, this selective rendering of the objects and the program indicates the emphasis and the value inherited from the Louvre in Paris.

The dynamics of this centering around the Louvre's name also symbolizes a transformation of a cultural embodiment to a commercial one for France while it allows UAE to earn validity and establish recognition by using this name. As the first universal Museum out of Europe and North America, Abu Dhabi Louvre unfolds discussions around the 'self-other' relationships. Initiated by the two governments, this arrangement is planned to be a thirty-year agreement consists of Louvre Paris's executive advice, object loaning, and the use of Louvre's brand for $1.27 billion. Through this partnership, Abu Dhabi aims to promote its internationalism as a contextually rooted one. Aiming to (re)tell the stories of the region in a universal arena, Abu Dhabi aspires to improve the image of the Arab culture,' (re)construct an identity' for it, and transform itself into a cultural center (Ajana, 2015) and a tourist attraction by these borrowed items. Although this partnership helps the country get acquainted and gain universal recognition and inclusion by using the Louvre's name as a point of reference, they also risk creating an authentic and ethical image. The criticality of the matter comes from its emergence to expose the fact that such a degree of exchange is more than a cultural one but becoming an economic strategy for countries looking to gain legitimacy and acceptance. The process of' manufacturing' a global recognition through The Louvre's cultural capital, Abu Dhabi Louvre, circulates the Louvre Museum's specific ideas and flags a critical danger for promoting the generalization of such themes.

4. Conclusion

The exchange program between the two Louvres highlights both sides of the story of the circulation of symbolic value and cultural capital procurement in a universal museum format. By tracing a genealogy of the matter and highlighting the motivations that fashioned this case, this paper aimed to present the conflict of embracing othering to portray an authentic self. This specific cultural exchange program's reductionist concept indicates a problem resulting from neglecting social and cultural relevance in identity-forming processes. By failing to form a natural dialogue between the represented artifacts, Abu Dhabi Louvre Museum underscores the importance of getting a distance from the preconceived ideas of the representation of others. With manufacturing familiarity and loyalty with landed artifacts, Abu Dhabi Louvre museum sets a controversial precedent on how to gain international acceptance and can become a global model. The core of this discussion also lies in transforming culture from 'shared values' to an economic asset through these exchange programs (Ajana, 2015) at the cost of a bias towards Western approaches over the grassroots artistic expressions. The aspiration of it all to present a comparison to consider the new dynamics of future cultural developments and the Museum's evolving ideology to recognize its consequences.

Image Captions

Fig. 1. Figures from different cultures on display in Civilizations and Empires. Louvre Abu Dhabi. Photography by Marc Domage. Accessed on September 10, 2020. https://www.smithsonianmag.com/sponsored/step-inside-louvre-abu-dhabi-180968376/

Fig. 2. Salle Gilbert et Rose Marie Chagoury. Musée du Louvre. Photography by Olivier Ouadah. Accessed on September 10, 2020. https://www.louvre.fr/en/department-decorative-arts-new-galleriesfrom-louis-xiv-louis-xvi-art-french-living

Fig. 3. Dancing Shiva, Hindu divinity. Christopher Pike. The National. Photography by Christopher Pike. Accessed on September 10, 2020. https://www.thenational.ae/arts-culture/louvre-abu-dhabi-the-long-awaited-first-look-inside-1.673668

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Design in Different Scales:
Two Projects by Pier Luigi Nervi

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Abstract

In 1956, the Italian engineer Pier Luigi Nervi, with the architect Annibale Vitellozzi, built the Small Sports Palace in Rome. The Olympic Games, planned for 1960, required the construction of sports facilities to host the competitions. Nervi's solution, especially for the dome, was considered a low-cost, simple-to-build design, to be replicated as a prototype in other Italian cities. Things happened differently. The engineer was busy with other buildings for the Olympic Games and the Small Sports Palace was never replicated.

The project became instead the prototype of a different experience for the Italian engineer. In America 10 years later, he was able to export his construction method. He was invited as a senior lecturer to prestigious universities, his books were translated and he designed famous architectures. During his American experience, Nervi was involved with developments in Norfolk, a city in the state of Virginia with an ambitious urban renewal program that included a new Cultural and Convention Center.

From the very first drawings published in local newspapers, it was apparent that the design of the dome reproduced the same geometry as the Small Sports Palace in Rome. In the Norfolk Scope Arena, the dimensions of the dome are twice the size of the dome in Rome, which raises the question of how Nervi dealt with the project.

The aim of this paper is to compare the two solutions that start from the same concept but are designed for different places and scales. The paper deals with the comparison between the two projects through architectural issues including the copy, model, and repetition. Through the theoretical issues and visual and geometric comparison between the two design projects, this research aims to improve the history of the two buildings through a new point of view about relationships between buildings with the same designer.

Keywords: scale, copy, model, forms, dome.

1. Introduction.

When the Italian engineer, Pier Luigi Nervi, was called by Captain Valerio Del Nero, who was on duty at the Nato base in Norfolk, on behalf of the mayor of the town regarding building a center for sport and cultural events, its fame in America was already established.

The proposal needed to appear concrete from the start. In Norfolk, the mayor relied heavily on Nervi's contribution to his project of transformation and development of the city, convinced of the repercussions and importance of having the Italian engineer signed on a new work. The mayor depended heavily on Nervi's contribution to his transformation and development of the city of Norfolk. He was sure that the project signed by the Italian engineer would have positive consequences for the city.

Nervi began to study the masterplan of the Cultural and Convention Center. Special solutions were considered for the theatre and for the covered arena. In the first drawings that were also published in local newspapers, the dome had the same geometrical pattern as the Small Sports Palace in Rome (Fig.1). Just 10 years earlier, the domes of the buildings for the Olympic in Rome had won worldwide renown and Nervi had been celebrated as the upholder of the Italian traditions regarding the design of large covered spaces.

The Norfolk dome was then made differently, but these first published hypotheses are the pretext for a comparison between the two projects Nervi completed, 10 years apart in the two contexts. The is also a comparison of measures as the dome in Norfolk is almost twice the size of the dome in Rome.

The issue of comparison as a methodology for a critical analysis in architecture is addressed through the reading in parallel of stories about the two projects. Although built in two distant cities for different reasons, both cities were experiencing an urban transformation and both projects were designed by the engineer, Pier Luigi Nervi. At the time of construction, it was the usual practice for the engineer to carry forward his theoretical thoughts on form-type, on repetition and on the use of copies and models in architecture and engineering that in some way had an influence on their works.

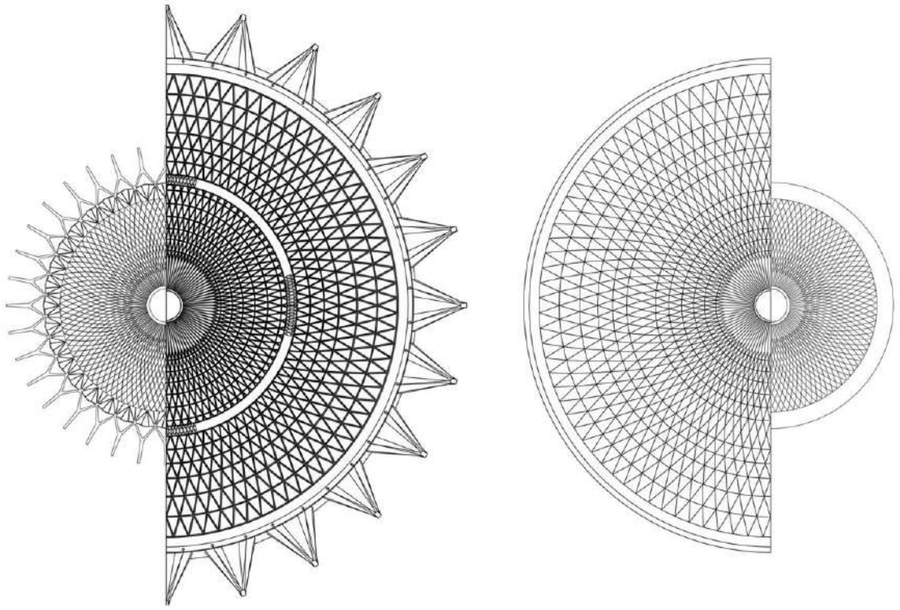


Fig. 1

2. The Small Sports Palace in Rome.

As a specialist in reinforced concrete, Pier Luigi Nervi began his professional career in construction companies. He founded the Nervi and Bartoli company and through this, he managed the market by experimenting with solutions that combined research into a new spatiality with rational use of the material and the sustainable and economic management of construction sites. The use of a material of his own invention that combines the iron and cement in new proportions called ferrocement and the structural prefabrication system linked to it became two distinctive features of the "Sistema Nervi". His experiments were perfect for spaces and covered areas of large dimensions.

Nervi was already famous in Italy for previous works such as the stadium in Florence and the Turin Exhibition Hall when he became involved in the transformation process for the Olympics in Rome during the 60s.

Even before the candidacy of Rome as a location for the Olympic Games, Nervi was involved through the architect, Annibale Vitellozzi, in the design of a prototype for a sports hall. The Italian Olympic Committee, the national authority promoting sport and sporting events was planning a project for a medium-sized hall for indoor events to hold approximately 4,000 to 5,000 spectators[1].

The Small Sports Palace has a circular structure. The playing field inside is lowered three meters. The inner organization of the seats is designed to allow alteration for different sporting events. Below the seats, there is a functional peripheral ring, which houses services for spectators and athletes. The basement level hosts technical rooms.

The dome has a diameter of about 60 meters. Its structure is designed to be independent of the seats and is based on a system of 36 buttresses. The buttresses have a Y shape in the plan but in elevation are anthropomorphic trestles. They have the shape of a person who stretches his arms open upwards, with one leg stretched backward and one bent forward. The dome is characterized by precast diamond-shaped elements with a thickness of 3 centimeters. In the center of the dome, there is a circular pattern of elongated triangular elements. After this part, there is a pattern of diamond-shaped elements that begins high up ending in a hooped ring of ribs. The description of the dome defines this as: “precast elements along the edge forming lunettes and the concentration of the ribs toward the support point on the inclined circumferential columns”[2]. The edge of the dome draws a sort of lace in precast along its circumference. The buttresses draw a circumference around the dome of about 80 meters in diameter. Six of the 36 buttresses that support the dome unload the weight on a continuous below-ground post-tensioned ring.

As it is easy to see in the section drawings, the forward legs of the buttresses are vertical on which the wall of the peripheral ring of the functional services rests. Above, at approximately half of the lower volume, a glass wall closes the inner space of the playing field. Natural light filters through the glass wall inside.

The circular roof has the shape of a lowered dome and was built with 1620 precast elements. On-site, a real scale part of the dome was built; from this, matrices for the construction of the precast elements of the dome were defined. A series of molds were obtained from the matrices. Using molds, more workers were able to simultaneously realize the precast elements in a warehouse. In this way, all the precast elements of the dome were quickly created and then assembled with reinforced concrete ribs using light and discontinuous scaffolding.

When the dome was assembled, the solution was superb, with a particularly special visual impact. Once the work was finished, it was not possible to recognize that its shape and appearance were consequences of its constructive and structural processes. The technique for the construction of the dome thus became fundamental for the other construction sites in Rome. In fact, it also reduces the costs compared with a traditional formwork system and reduced construction times. The construction site was an organized machine, where everything was completed with minimum cost. While the foundations were being prepared and the columns are being cast, in a warehouse the workers were already working on the prefabrication of elements of the dome, which were assembled within a month.

The Small Sports Palace was the beginning of Pier Luigi Nervi’s adventures with the Rome Olympics in 1960. The event revolutionized the city through a great urban and architectural transformation.

Nervi contributed above all to the urban regeneration of the Flaminio area, where he built the Small Sports Palace and also the Flaminio Stadium, and the Corso Francia elevated road. The Sports Palazzo, another facility built by the engineer, is located in the Eur, another area of the city organized to host the Olympic Games.

In the Flaminio district, Nervi's projects are a few steps from each other. Against the backdrop of the Olympic Village, his two sports facilities together with the elevated road draw a substantial piece of the city so that preserving the buildings as a network of architectures rather than as individual buildings is currently being proposed[3](Fig. 2).

The Olympics facilities and the diffusion of their images and of their technical explanations were echoed worldwide, increasing the fame of Pier Luigi Nervi. The image of the Small Sports Palace’s dome became an icon of the architectural beauty that characterizes the spaces covered by Nervi. Nervi, when sending photos of the Small Sports Palace often took care to instruct that Vitellozzi should be named as co-designer of the building, as he was often considered the only designer of the building.

Subsequently, there were many requests for collaboration with the Nervi office in Rome. Proposals originated especially from America where Nervi is building solid relationships for at least 10 years[4].

Often, requests are made to replicate the magnificence of the dome built in Rome for the sports facilities needed during the Olympic Games. Decision-makers ask for a new building with the characteristics of Nervi’s previous buildings to bring prestige to their city while ensuring rapid but economic construction.



Fig. 146. The Corso Francia elevated road, Rome: aerial view. In the left foreground is the Flaminio Stadium and the Small Sports Palace. Between the Sports Palace and the river, and bisected by the roadway, is the Olympic Village for the 1960 Olympics.

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Fig. 2

3. The Cultural and Convention Center in Norfolk

In America, Nervi became the essence of new architectural modernity based on the truth of the great structures; through their forms, they show their static layout. This structural honesty is their beauty, which is especially ethical.

Although the techniques of the Italian engineer were not as cheap abroad as they were in Italy, this seemed of little concern. In fact, in Italy, it was usually his own company, the Nervi e Bartoli, the only national company holding the patent on precast and ferrocement, which built his structures. The main challenge for Nervi was exporting his construction system, which was almost unknown in America, and applying it to large covered structures. In America, it was difficult to find workers and companies that could obtain the same result with the same costs.

Nervi is famous for his engineering challenges in Norfolk too. In 1965, following their first telephone contacts, the mayor of Norfolk, Roy Martin, sent Nervi a missive. With simple words, he declared his esteem, which was also confirmed by other local political decision-makers. They admired his works through his books and they hoped that Nervi would be interested in the project for the Convention and Cultural Center in their city.

The proposal for the Cultural and Convention Center required the design of a complex to include an arena for sporting events, a theatre, an exhibition hall, and a parking garage. The mayor's aim was to preserve the old style of the city and to “create a landscape with new artistic buildings, to be preserved with time”[5].

Throughout this time, the Nervi Office was not only linked to the construction company; it was not operating only as a structural consultancy enterprise. With the help of Nervi's sons, two architects, and an engineer, the office became a design studio for architectural and engineering buildings thus becoming involved in the whole construction process, from the idea to completion. His son, Antonio, due to his knowledge of the language, manages customer relationships and his father’s request to decision-makers, thus fulfilling an official role within the project as a consultant. His son, Mario, is involved in the design of the structures. From Nervi’s previous American experiences, he was aware of the difficulty in following construction processes from a distance. He therefore immediately agreed to be a consultant of the group of local designers, Williams and Tazewell, and Associates.

Although the office in Rome was already working on the design of the arena and the theatre, during a subsequent meeting in 1966, the roles of the group within the project were clearly defined. Nervi was to manage the dome with the roof but no the foundation ring; the bridge in the landscape area with the structural elements in the immediately surrounding included the railing; the inner and outside staircase; the seat and the sunshade systems[6].

For the arena roof, it was decided immediately “a solution with a dome covering […] the dome surface is divided into 1920 parts of 40 different types; i.e. for every type there are 48 elements perfectly equal, that can so be prefabricated with a very reduce the number of molds”[7]. As happened for the Small Palace in Rome “the precasting can be obviously executed simultaneously with the other structures of the building, and this will consent an economy in the time of construction” [8]. Despite the

solution already studied, the designers wanted to inform the client that the result is not taken for granted: “the solution is in our opinion very satisfying from a formal point of view, but it is necessary to point out that this result does not involve any difficulty in the construction because the precasting system studied (that we already adopted in same occasional) allows, on the contrary, a considerable economy of material and work” [9].

The final solution was a dome with a circular shape and a diameter of about 100 meters. The dome has a lowered arch shape. It is supported by 24 pairs of V-shaped buttresses with variable section. In the first project description, “the roof is supported by 24 V-shaped pillars and by vertical elements arranged to correspond with glass panes to resist to non-symmetrical loads. The 24 concrete pillars will have a striped or twisted surface with carefully worked forms and will be left in exposed concrete. This system confers a particularly expressive architectural effect upon the entire center”[10]. Along the design process was eliminating the connection between vertical columns and buttresses that created some problems in the project of the landscaped areas surrounding the buildings.

The edge of the buttresses draws in plan a circumference of about 130 meters. As in the Small Sports Palace solution, there is a below-ground prestressed ring. The buttresses release the thrust of the dome into the ring. The edge of the dome misses the precast lacy system that characterizes the Small Sports Palace, however, but there is a ring of reinforced concrete cast on site[11]. In fact, in the Norfolk Scope Arena “The perimeter buttresses (of a complex ruled-form shape) do not collect the loads from the individual ribs through fanning, gathering elements. Rather, each individual rib meets a thick tension ring beam that runs around the arena’s perimeter, replacing the delicate and evocative eyebrows of the Palazzetto with a heavy, inarticulate element”[12].

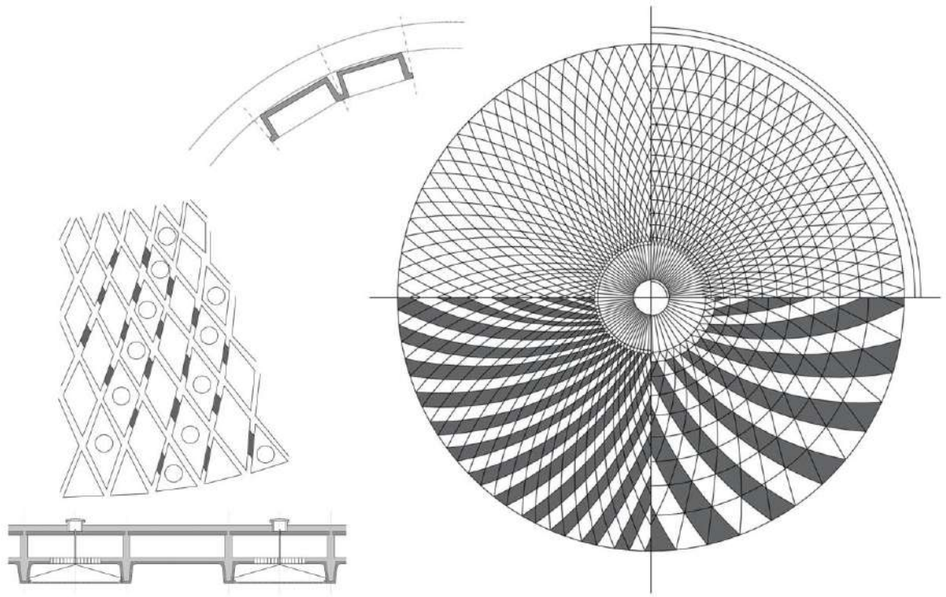


Fig. 3

The design of the precast elements, however, involved several hypotheses before the final solution (Fig. 3). In some starting drawings – without the transition ring at the edge of the dome – the geometric pattern of the precast elements of the dome is the same as the Small Sports Palace. They differ only in the density of the geometric patterns. Another previous solution was defined that “some of the prefabricated elements of the roof will be blind, while others will be open to allow the flow of air for the air-conditioning apparatus and the installation of lights. The lights will be arranged in a spiral-shaped design to obtain a particular effect. The dome itself will be a double dome in order to channel air for the air-conditioning installations and to serve as a heat isolation device for the hall” [13]. The dome would have had a different geometry characterized by an alternation of solids and voids linked to the light system. The dome was then built similar to the Small Sports Palace. The geometric pattern is characterized by circumferences that start from the center and radiate towards the edge of the dome. The precast elements of the dome have a triangular shape and a thickness of about 5 centimeters. The change in the final shape was described in a part of a technical report sent to the designer’s group: “As you can see we have modified radically the design of the ribbing of the dome. In our original scheme […] the prefabricated panels were lozenges whereas in the present project they are triangles. And whereas in the original project the single prefabricated panels were curved, in the

present one they are flat. As consequence, the resulting vault is made up of a poliedric surface inscribed within a spherical surface. The number of facets of the poliedric surface is so great that the aesthetic result will be equal to that of a sphere. However, the economic advantages derived from the solution are most noteworthy. […] With flat elements one can furnish all the geometric dimensions of the molds and thereby pass at the construction directly to these, eliminating completely the making of the master mold and of the grandmother and mother molds. Having, for this reason, decided to change to flat panels we consequently chose a triangular form for the element instead of a lozenge form. […] In the present project however, this small disadvantage is largely compensated by economic advantage achieved in the construction of the panels" [14].
The organization of the bleachers was designed by the Nervi Office too, specifically to meet the requirement for the inner playing field to change according to the type of sporting event. As the report describes: "The solution adopted has been a fixed non-symmetrical stand and two movable stands" [15] supported by large frames in reinforced concrete. The great overhang of the bleachers included the system of the circular walkway with stairs. The final solution, however, was simpler than this with a symmetrical organization of the seats around the playing field.
The section drawings show that the playing field is at a lower level than the gate floor. As in the Small Sports Palace, the dome is completely independent of the bleachers. This solution allowed the creation of a functional ring space under the bleachers. Unlike the solution in Rome, here the buttresses that support the dome are not against the perimeter, so the arena is closed towards the outside by a continuous glass wall. This provides for a ring of inner space between the glass wall and the functional spaces under the bleachers. Further functional spaces are on the basement floor (Fig. 4).

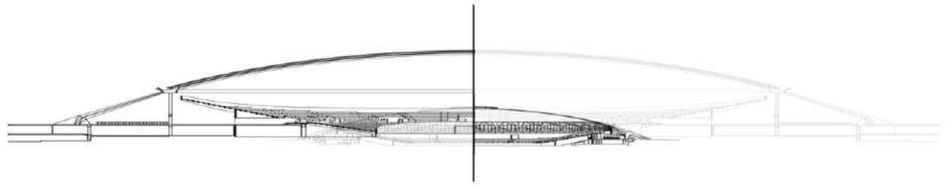


Fig. 4

As his son, Mario, remembered years later, Pier Luigi Nervi was very busy during those years with the project for the Hall of the Pontifical Audiences in the Vatican City, so he left his sons to manage the project almost entirely themselves. Although Mario acknowledged that the final solution looked like the Small Sports Palace in Rome, he remembered that the Norfolk Scope Arena held the record for the largest reinforced concrete dome in the world[16].
The final solution of the dome, the geometric design of its precast elements, is close to the solution of the Small Sports Palace and is far from the first hypotheses which were different and original compared to Nervi's other creations. For the engineer, the design must never be far from the construction phase, so some choices were conditioned by in situ technical conveniences.
His son, Antonio, followed the Norfolk project and despite the distance, he communicated effectively with the companies to solve problems related to the structure of the dome and its construction.
The Norfolk Cultural and Convention Center is part of the urban renewal and redevelopment program carried out by the City of Norfolk and the Norfolk Redevelopment and Housing Authority, which began in the mid-twentieth century. The center was in fact financed by the funds of the Federal Urban Renewal programs which were grants for the construction of public infrastructures, schools, and community structures[17]. The construction of the center leads to Nervi winning eight other urban funding programs for the city. The example of Norfolk and the policymakers' ability to manage national funding were then studied as best practices. The cultural center also had its economic return in terms of investment. In the city report on the Norfolk Scope Arena project, the following judgment is reported: "Scope establishes a standard which will positively influence the direction and quality of future downtown development" and this served as a "dynamic force in the continued expansion and direction of the central city's rebirth"[18]. The Norfolk Cultural and Convention Center and the decision to have the engineer Nervi as its designer were part of the city's philosophy for improving the quality of urban life of its citizens and increasing the cultural and tourist value of the city. The Norfolk Scope Arena was for many years the largest concrete dome in the world and is the only work of an Italian engineer in Virginia.

4. Is Architecture moving towards immutable forms and characters?
The two projects, the Small Sports Palace and the Norfolk Scope Arena are associated with their similarity despite their great differences. The most evident difference is certainly their size. The dome

in Norfolk is almost double that of the dome in Rome. The two domes have precast elements with a similar shape but they differ significantly in the structural resolution and technical solutions.
So, what is interesting in their comparison? These two projects due to their relationship may be useful to explain the engineer's idea regarding the form-type for the design of large structures.
According to Nervi, the structural design must be based on three fundamental principles which are static nature, functionality, and economy. The new needs to equip countries with large structures such as stations, airports, or the main infrastructural networks bring the opportunity to create new forms for covering large spaces.
The proportion of these new forms must depend, according to the Italian engineer, exclusively on adherence to physical rules. In this sense, the static sensitivity, also linked to the resistance of the construction material and the technical choices, becomes very important in the design project. Cheapness is not related to poverty, but the ability to use a technique for the maximum result with minimum waste of materials. For Nervi, cheapness also means essentiality of the structure, of the shape, with strict adherence to the statics roles and use of the necessary quantities of materials. An essential structure, according to the Italian engineer, will also be aesthetically beautiful.
During a lecture on 3rd May 1960, the engineer explained his concept of dimensions to the students with the following words: "If you build a vase or a chair, any shape can be used. If their dimensions are double, the shape will probably still be fine. But when the dimensions get 10 times larger, many possible solutions will have to be rejected. When the dimensions get 100 times larger, perhaps one or two possible solutions in 100 remain. When the dimensions become 1000 times larger, there will probably be only one possible solution, or perhaps none at all"[19].
When the best form has been identified that is the most natural, logical, and economic from a technical point of view, according to Nervi this will be a form-type. The use of form-type does not cause formal monotony or serial repetition. To show this, he often gives the example of aircraft, which although their form is strictly dependent on the laws of nature, their design shows different aesthetic sensitivities.
When using a form-type, serious mistakes are possible if materials are not used correctly, or technical and construction efficiency is ignored, or the laws of nature are not adhered to. Nervi gives an example in the article, *Model and imitation* of his column *Criticism of structures* in the journal *Casabella-Continuity*. The pretext comes from the comparison between his project for the Turin Exhibition Hall and an exhibition hall built in Nice by Lauger and Fils architects[20]. After a careful comparative analysis of the two structures, Nervi's message seems to be that the exhibition hall in Nice, due to its mistakes from a static and constructive point of view, demonstrates no learning from the model of the Turin solution, but instead offers a poor imitation. In the analysis of the buttresses and of the dome, Nervi identifies mistakes in the solution of his French colleagues: their project fails to follow the static diagram. Comparing the construction and details of the precast elements, it is clear that differences between elements of the two projects make Nervi's project unique and original.
Elsewhere, Nervi explains how solutions and technical choices create differences in the final constructions, even if the static diagrams are the same. Regarding the project for the 200m spans in reinforced concrete design by the architect Libera for the Universal Exhibition E42 in Rome, Nervi writes that if the arch had been increased in its dimensions, it would have been statically stable with the same design and the same shape, but the construction difficulties would have become insurmountable[21].
It is clear, from his words and from his works and his investigations into new materials and techniques that Nervi considered his work as a research path. On occasions, Nervi reported re-using certain previously studied solutions for further projects. An example was the large stadium project studied in 1932, which he used as a starting model for the stadium in Rio de Janeiro in 1946[22].
The form is therefore the result of the construction process: it depends on form static rules and technical possibilities. For the form, however, it is necessary to consider the constructive possibilities of the materials; these together with the analysis of the form define the character of the buildings.
In his famous book *Aesthetics and Technology in Building*, in a note describing the precast elements of the Small Sports Palace dome, Nervi writes: "The form of the elements and the configuration of the ribs is primarily based on the aesthetic and architectural decisions, but the maximum dimensions of the units are determined by construction factors. Indeed, their weight must not exceed the capacity of the lifting equipment available on the site"[23].
In this note, he explains the importance of technical and construction issues in determining the aesthetics of constructions.

5. Conclusion
The Cultural and Convention Center in Norfolk and the Small Sports Palace in Rome are both projects by Nervi with a special value for the cities in which they were built. Both have somehow drawn a piece of the city contributing to their urban growth and transformation (Fig. 5). They are the result of two urban developments, but also of two political dynamics which, although not exempt from criticism, somehow have some features in common.

When it was announced that Nervi is participating with his project in the urban development of Norfolk there was some controversy by local designers. But the Italian engineer is also welcomed by local newspapers as "a Michelangelo for Norfolk". Therefore, his involvement in Norfolk development is a marketing city operation very similar to contemporary dynamics.
In other American experiences, Nervi had given up on prefabrication because it was too difficult to control and uncompetitive from a technical and economic point of view outside Italy. Despite the failure to export the "Sistema Nervi" in America, the Scope Arena has been a success. Despite the difficulties of the construction site, the changes in the statics and the geometry of the elements, the process of making the dome almost followed the philosophy of Nervi, and the construction process war similar to the Italian experiences.
The Nervi family did not attend the inauguration of the Scope Arena but their colleagues wrote them to say that the dome seemed fantastic and that they were happy with the workmanship involved. So this comparative reading of the two architectures has highlighted the Italian engineer's thinking and his technical and traditional knowledge and how he tried hard to export them all over the world.
The craftsmanship of the construction site and the beauty built by the union of the fragments are the two characteristics of these architectures that most determined their greatness.

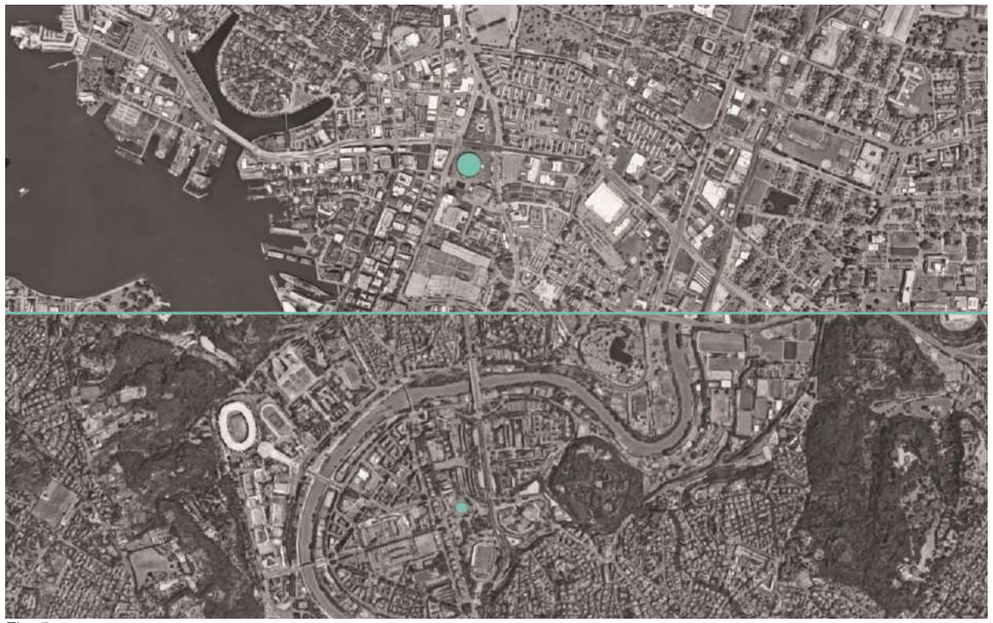


Fig. 5

Notes

1 Tullia Iori, "Palazzetto dello sport a Roma, un prototipo ripetibile e a buon mercato", *Casabella n°* 782 (October 2009): 51-59.
2 Pierluigi Nervi, *Aesthetics, and Technology in Building*. (Cambridge: Harvard University Press,1966), 140.
3 Ugo Carughi. "Roma, stadio Flaminio verso una tutela attiva", *Il Giornale dell'Architettura,* https://partnership.ilgiornaledellarchitettura.com/2018/11/05/roma-stadio-flaminio-verso-la-tutela/ (accessed 08 September 2020)
4 Alberto Bologna, *Pier Luigi Nervi negli Stati Uniti. 1952-1979*. (Firenze : Firenze University Press, 2013), 132-144.
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11 Edward M. Segal, Sigrid Adriaenssens, "Norfolk Scope Arena: A US Dome with a Unique Configuration of Interior Ribs and Buttresses", *Journal of the International Association for Shell and Spatial Structures*. Vol. 54. n. 176 & 177 (September 2013) :189-198.
12 Thomas Lelsie, *Beauty Rigor: Patterns of production in the work of Pier Luigi Nervi*. (Urbana: University of Illinois Press, 2017), 90-91.
13Cultural and Convention Center – Norfolk. Technical Report, (Dicember 1966). op. cit.
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16 Mario Nervi, "L'insegnamento professionale e universitario di P.L. Nervi", *Nervi oggi: scritti dalle mostre e dai convegni,* eds. L. Ramazzotti, (Roma: Kappa, 1983), 67.
17 Norfolk Redevelopment and Housing Authority, *History of NRHA*, http://www.nrha.us/about/history (accessed 08 September 2020).
18 Virginia Department of Historic Resources, "Preliminary information form for individual properties". Evaluation of the Norfolk Cultural and Convention Center, https://www.dhr.virginia.gov/ (accessed 08 September 2020).
19 Roberto Einaudi, "Pier Luigi Nervi: lezioni romane Lecture Notes, Roma 1959-60", *La lezione di Pierluigi Nervi,* ed A. Trentin, T. Trombetti, (Milano: Mondadori, 2010), 119.
20 Pier Luigi Nerv, "Critica delle strutture: Modello e imitazione.", *Casabella-Continuità* n°227 (May 1959): 50-51.
21 Pier Luigi Nervi, *Scienza o arte del costruire? Caratteristiche e possibilità del cemento armato*. (Roma: Edizioni della Bussola, 1945), Table XIV.
22 Pier Luigi Nervi, *Costruire correttamente: caratteristiche e possibilità delle strutture cementizie armate.* (Milano: Hoepli, 1955), Table LV.
23 Pierluigi Nervi, *Aesthetics and Technology in Building*, *op. cit.*,139.

Image Captions

Fig. 1. Geometric comparison between the patterns and the size of the two domes. Drawings by the author.
Fig. 2. Aerial view of Rome with the Nervi's projects in evidence. Picture from the book Pierluigi Nervi, *Aesthetics and Technology in Building, op. cit.*,172.
Fig. 3. Comparison between different hypotheses for the Norfolk Scope Arena's dome. Drawings by the author.
Fig. 4. Comparison between section drawings of the two projects. Drawing by the author.
Fig. 5. Views of the two projects through google maps in the cities: Norfolk (top) and Rome (bottom). Collage by the author.

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Architectures of the Intertwined East and West
‘Contact Zone’s of the 19th century İzmir House

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Abstract

İzmir, amongst Eastern Mediterranean port cities, has represented compelling architectural and urban developments during the long nineteenth century. Due to their particular geographical position, the port city of İzmir has been considered a place where "East meets West". Building on what Edward Said calls intertwined history, this paper proposes a lens to read cross-cultural architectural practices at entangled territories by closely examining paired determinants from the East and the West.
With the duality in mind, this study borrows the concept of "contact zone" from the field of linguistics to identify the correlation of the Eastern and Western norms, knowledge, ethics, values, techniques that led to architectural knowledge production and architectural practices. Mary Louise Pratt coined *the contact zone* as "spaces where disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination." This study departs from "asymmetrical relations of power" that exist in architectural practices. Not only does the concept allow us to understand the characteristics and dissemination of architectural knowledge, but also it allows us to address the unspoken and invisible process of decision-making in architectural practices.
To test the concept for architecture, the 19th-century row-house development in İzmir, i.e., İzmir house, is an appropriate concrete case. Dissecting the building and construction process of the İzmir house through the lens of the contact zone reveals how much the West is present in the East, or vice versa.
In conclusion, this paper shows that besides material artifacts and explicit architectural knowledge; socio-cultural contexts and values are also embedded in the architectures. By shining a light on the underlying patterns of the social, spatial, cultural encounters, the concept of "contact zone" establishes a better understanding of the specificity of the knowledge that diverse variables have collectively generated.

Key words: Intertwined histories, contact zone, port city architectures, İzmir.

1. Introduction

The scholarship of global history writing has recently become more interested in the complexity of the cross cultural development processes. Until the last decades, the established understanding in the field focused on the import and export model. This model suggests that knowledge produced in the West has been exported to the developing countries;[1] however, scholars began to acknowledge established perspective overlooks the complexity of the process.[2] In line with the increasing interest, architectural historian and critic Esra Akcan offered to use the notion of the translation to read cross-cultural developments as an exchange between the geographies: between German-speaking countries of Europe and Turkey.[3] Akcan brought a deeper understanding of the global exchange of knowledge through analysing the mobility of people, ideas, technology, information, and images from one or more countries to another within the socio-political context of the studied era. By taking into account carefully the agency of mobility of people, ideas, technology, information, and images in the cultural exchanges, she explored the exchanges in the constitution of the modernism in Turkey through the modern house in her book ‘Architecture in Translation: Germany, Turkey, & the Modern House’.[4]

Contact zone, another concept borrowed from the field of linguistic, carries ample potential to revealing the complexity of cross-cultural developments. In the book titled “Casablanca Chandigarh: a report on modernization”, professor of architecture and urban design Tom Avermaete *et al.* adopted the concept of the contact zone and introduced it to the field of architecture, addressing how “Architects, Experts, Politicians, International Agencies, and Citizens Negotiate Modern Planning” —that was also the title of the exhibition that Avermaete and Maristella Casciato exhibited between 26 November 2013 and 20 April 2014.[5] The concept initially was introduced by the linguistic scholar Marie Louis Pratt. Pratt coined the term contact zone referring to the social spaces where asymmetrical relations exist.[6] In the field of architecture, Avermaete considers the contact zones where the transculturation took place in cross-cultural practices.[7]

Avermaete tied the notion of transculturation to the contact zone in order to establish a better understanding of cosmopolitan practices. The Cuban anthropologist Fernando Ortiz coined the term transculturation to enhance the understanding of the cultural exchanges between one culture to another.[8] In this complexity, three associated terms collectively constitute the “transculturation” process.[9] “Acculturation”, as the first term, is defined in Merriam Webster as *“cultural modification of an individual, group, or people by adapting to or borrowing traits from another, also: a merging of cultures as a result of prolonged contact; the process by which a human being acquires the culture of a particular society from infancy”.*[10] “Deculturation”, as the second term, is related to losing the culture. The third term in this transculturation process is neoculturation, and it is related to forming new cultural practices.[11] Ortiz’s perspective points out the transculturation is related to simultaneous occurrences. Following Avermaete’s theoretical conception for architecture, I attempt to read the contact zones in architecture and the transculturation process in the building practices by keeping the degree of the asymmetrical relationships of the encounters in mind. In this respect, the use of the notion contact zone allows us to identify the human and non-human contacts. Exploring the relationships from the ‘contact zone’ perspective shines a light on the transculturation process covering the Eastern and Western encounters.

In this research, I aim to explore contact zones that coexist at the intersection of multiple levels of the building process of architecture (i.e., urban planning, architectural design, and construction phase). Pratt’s definition refers to the social spaces where asymmetrical relations exist. Architectural practice by nature is based on decision making. Decision-making for multiple occasions is related to the asymmetrical relations of the present contacts in the given situation. These contacts are not limited to individuals or groups of people. Contacts could also be between ideas, between building techniques and materials, and between values. By exploring the paired relations between the contacts and their influences in architecture, I hope to bring underlying yet unseen and unspoken patterns of cross-cultural exchanges to the surface. In doing so, I aim to add the focus of the concept of contact zone from the social encounters to the entangled relations of human and non-human contacts simultaneously present in the architecture.

For this inquiry, I study the development of the 19th-century row house, also known as İzmir house (*İzmir Konutu)*. The Eastern Mediterranean port city of İzmir is on present-day Turkey’s west coast. The development emerged along the shore of İzmir in a particular era when the multinational, multi-ethnic, and multi-cultural co-existence reached its peak in the Ottoman İzmir. Thus, house is a significant case as a material expression of cross-cultural exchanges that occurred in the intersection of the social, cultural, political, economic developments. Additionally, the city’s specific location on the globe makes the case more appropriate for this research. To understand how much West presents in the East, and vice versa, I order the paper as follows: first, I explain in which context and under which conditions the row-house has emerged in İzmir. I start by providing the background information of İzmir in the 19th

century. Then, I continue with dissecting the building through its building elements to understand how the building arrived at its final form: the urban planning, the façade order, the spatial organization, building techniques. I conclude by analysing the contact zones that coexist in the building process to show how the locals and migrant European upper-class society have negotiated. Reading the architectural developments in the 19th century through the lens of the contact zone allows us to bring the underlying patterns to the front.

This paper has a methodological ambition to use the lens of the contact zone to identify the contacts in two levels —macro and micro levels. The building of the 19th-century row house is a result of local and global developments. In this development, economic, political, and technological developments were the main drivers to create conditions for architectural and urban practices. The first level of the contact zone is at the macro level, given the contact zone was often established between empires, states on a global scale. At the macro level, the first level of contact zone has been set through the uneven conditions provided by the governments or the empires and based on their mutual interests in the city and its regions. These encounters were the main impulse for creating the fundamental conditions for social, spatial, and cultural situations. Following this, the encounters between diverse social groups and individuals have provided room for cross-cultural exchanges. These intersecting contact zones created an optimal situation for the İzmir house. Following this, I move on to the second level of the contact zone. Within this paper's scope, I consider every architecture project has an outcome of the situations in the micro-level. Establishing the relation between the first level, I wish to explore the second level in the micro situation through the selected case İzmir house. Outcomes of cultural encounters manifested themselves on buildings and their elements. In this regard, I dissect the 19th-century house into its components (e.g., spatial organization, façade orders, ornaments, roof, building materials, building techniques) to reach and discover the underlying patterns of the contact zones that have collectively built the residential blocks. Reading the city through the contact zone allows us to understand how the East and West coexist in architecture.

2. The pre-conditions: Brief History of İzmir

Trade acts and economic treaties provided safe mobility for the elite traders and upper-class migrants from Europe to İzmir, particularly in the 19th century. Political unrest in Europe was one of the main drivers for the migration of international traders to the Ottoman Empire particularly since the 16th century.[12] The leading sea-traders of France, England, the Netherlands, and Venice perpetuated steady economic relations with the Ottoman Empire during the 18th century.[13] Holland was much impoverished, and England became the more dominant maritime power after Napoleon's defeat in 1815. In the late 1830s, the Ottoman Empire was struggling with the revolt by the governor of Egypt.[14] It was difficult time for the empire.[15] In 1838, the *Balta Limanı* Trade Treaty was signed between the UK and the Ottoman Empire. Later, the treaty has bound to other European Countries e.g. France in 1839, Hansa Cities Lübeck, Bremen, Hamburg; in 1840, Sweden, Norway, Spain, The Netherlands, Belgium, Zolverein Countries Prussia, Bayern, Saxony, Grand Douches, Thuringen, Nassau Union, Free City of Frankfurt; in 1841 Denmark, in 1843 Portugal and lastly in 1846 Russia.[16] According to *Balta Limanı* treaty signed in 1838, the 8% tax for foreign traders who used İzmir as Transit region, was removed.[17] As a consequence provided with main drivers, the upper-class European migrants arrived in İzmir in the 19th century.

Building port, quay, a new custom-house, and railways, were essential for İzmir. Because port facilities must be in sync with one another to function efficiently in line with global premises: standardized in terms of measurement,[18] capacity of ships, wharves, docks, warehouses.[19] Large infrastructure works and new establishment of the industrial facilities have often led to the migration of the upper class that included engineers and developers. Working-class or sub proletarian Europeans have immigrated to the Ottoman Empire in particular working in major ports or in large-scale infrastructure projects such as railway or port construction or operation.[20] Migration was reinforced with the land ownership rights given to the foreigners in 1856. The population has increased from 15000 to 50000 between the years 1847 and 1880. Upper-class consisted of diverse professions. Due to presence of the merchants and the increasing population in the city, the European social groups' needs have grown. For instance, the social groups began to have their own hospitals, schools (French Hospital, Muslim Hospital), -physicians like M. Michel physician in the French Hospital, French Architect Raymond Charles Pére who was French teacher and designed the Clock Tower in the city— have worked in those places.[21] 1856 dated *Islahat* Firman allowed opening schools individually for the societies living in İzmir. European families have educated their children in the French and Italian schools in line with their own cultures that is applied in those schools.[22]

In the nineteenth century, the Eastern Mediterranean was strongly inter-connected with Western, Central and Southern Europe.[23] Historian Malte Fuhrmann sheds the light how upper-class Europeans lived in the Ottoman Empire. He discusses upper class' spatial presence in terms of "locality" in spatial,

legal and subjective dimensions. According to Fuhrmann the locality is *"where a certain person stays the de facto largest amount of his or her time (the spatial dimension)"*; secondly, he continues, *"locality that recognizes the individual as a legitimate user of a particular space (the legal dimension)"*; thirdly, *"the locality to which the individual attaches a predominant degree of his sense of belonging (the subjective dimension)"*. This belonging to the locus is an outcome of the transculturation process which manifested in the architecture. In particular this engagement was visible in domestic spaces (e.g. row house along the waterfront) and in downtown, and social spaces of their daily life. In the 19th century developments, the society was in the heart of the social, spatial, and cultural developments. Pre-existing condition was based on high respect of the society to one another. The simultaneous developments have created a peaceful, high respected and tolerated condition for societies to develop the city further.

3. The Nineteenth Century İzmir House



Fig. 1

Scholars often refer to the houses along the waterfront of İzmir from to the 19th century as "another house". According to the author Şeniz Çıkış, the row-house development in Izmir stands as an example of the early modern housing in the Ottoman Empire. In fact, this house and spatial typology belong to the unique intersection of local and global. The idea of row-house migrated from Europe reminding its precursors such as apartment blocks in London or Paris.[24] The new typology was determined with the local characteristics. There has been already Anatolian house, also known as Chios Type House in the region.[25] Thus, houses in İzmir in the second half of the 19th century was between the tradition and modern. The spatial organisation of these houses has consisted of three main spatial elements, a garden or yard, service and living spaces. An entrance hall and daily life spaces were organised in the ground floor asymmetric or symmetric axis. These houses often have asymmetrical plans matching with asymmetric façade orders. In the backyard of the houses there has been located at small backyards surrounded with high walls. Service spaces were articulated to the main building as being located on the garden's corner.[26] In some cases, construction system was combined with timber and masonry construction.[27]

3.1 Urban Planning: The application of the Grid Plan

Infrastructure construction like train, tram, and quay along the shore were the agencies of the development and opened up new possibilities for the building plots in the city. According to the insurance maps, the first housing parcels were established between 1837 and 1856.[28] Developers owned the land and sold the plots for the further development. When the French company or developers built quay around the waterfront, they gained some spaces when the sea was filled. On these sites, French company produced parcels.[29] The same happened when the Belgian tram company produced other islands for buildings on the avenue on which they established a tramline and sold plots.[30]

The Tanzimat reformers established a new understanding on urban administration. Before the Tanzimat Charter municipal rules and regulations were based on imperial orders, juridical rules as well as customs and traditions. Internal recognition in the underdevelopment in the empire prepared a common ground for the modern development in İzmir. Narrow streets, wooden constructions have led to multiple fires in İzmir. For instance, Armenian neighbourhood was torn down in the Great Fire of 1845. İzmir was not the only city that suffered from these fires, it was the same in Istanbul, the capital city of the empire. Thus, the Ottoman Empire followed new planning approaches for the burnt plots in the city. In 1845 the first planning approach was applied in the burnt area in İzmir. Luigi Storari applied the first grid in İzmir

in the Armenian neighbourhood. Storari introduced the square in the modern sense to the Ottoman Empire.[31]

Luigi Storari was an important transnational actor in the modernization of İzmir and was one of the migrants who arrived in İzmir. The reason of his arrival to İzmir was political unrest in Italy. The Papal State was not a comfortable environment for Storari given he was a member of a revolutionary group called *Carboneria*.[32] He worked in the Italian army and developed knowledge on modern urban mapping techniques.[33] He arrived in İzmir in 1849 and collaborated with the Ottoman officer Ali Nihat Efendi.[34] In addition to the grid-based urban plan that he also applied in the Armenian Quarter, he wrote and published a guide as well.[35] His text included an extensive description of the Ottoman urban fabric based on his surveys in the city. He noted that the city was lacking squares, public spaces for entertainment, and promenade.[36] His views on the public and social spaces were influential in the further development in İzmir. The developer of the Kasaba-Smyrna Railway granted rights through the treaties and agreements for the site of the house block along the waterfront. Accordingly, Luigi Storari developed an urban plan for the urban development based on the grid system. In this way, the first modern urban planning emerged to city's waterfronts.

3.2 The Spatial Organization and the Façade Order

The collaboration with Luigi Storari is a testimony to the emergence of modern developments on the shores of İzmir, and also to the acceptance of a new life style. Until the 19th century, the urban fabric of the Ottoman Empire mostly consisted of the dead-end streets. The development of the urban pattern is an expression of the value system of the local Ottomans. The Anatolia is the cradle of the civilizations, the grid plan was already applied in the Asia Minor, in this very place of the developments in the region of İzmir. Ancient cities *Miletos* and *Priene* are great examples of the grid planning.[37] The introverted, conservative, and humble lifestyle complemented with the family relations in the Ottoman period led to web of streets with dead-ends. The dwelling of the human being, particularly in Anatolia, initially developed by learning from the existing built environment, accepted, rejected, or developed certain principles of the existing codes that were inherited from the previous civilizations. The spatial composition took its source from the existing typology in the region and remained and adjusted in the design process. The choice for the spatial organization was also very much in line with the local climate condition.

The architectural elements on the façade reveal overlapping patterns of the social and cultural encounters. Interaction between diverse societies was key in the urban cultures of İzmir. The balconies, called *cumba* in Turkish, shows the maintenance of the local practices and migrant social groups' acceptance. The form of the balcony, extended towards to street, establish relationship with the street and allowed to be in contact with the neighbour. Having good relations with the neighbors was one of the important pillars of the local cultures, particularly amongst Turks. Additionally, three sides of the special balcony allow occupants to benefit from the light and fresh air at its best.[38] Climate, topography, and existing building materials in the region have been important determinants in the building techniques and spatial organizations for the development of the residential types. The ornament was not the fundamental concern of the artisans, although it was appreciated.[39] The circulation of iron samples and cast iron for buildings through the railway construction has been a part of the façade of the building. Particularly the balconies' constructions have been altered. Local houses had wooden supporters underneath of extensions as a part of the structure. In the İzmir House, the irons replaced the wooden supporting materials and became an ornament in the façade as a reflection of the social status associating with the contemporary developments. It was also a reflection of the modern as a counter part of the traditional.

The façade orders and ratio of the windows and doors show the respect between different cultures. Amongst the other values of the society, the notion of respect was an important actant in the decision making. Respect for one another was a key of the Ottoman multi-religious, multi-ethnical and social structure. Due to the spatial organization, façade orders, the governance and office service have accepted the development by considering that it is suitable for the Turkish family traditions.[40] The introverted and conservative lifestyle of local Turks strongly separates the in- and outside in their houses. Thus, the local preferences have been maintained. Local and European cultures have together determined the final project of the row house. Rather than dependency to one another, the formation of the modern row house reflects mutual tolerance to the cultures, beliefs, values between the multi-religious and multi-ethnical societies of İzmir.

4. Building Techniques

Building techniques in the 19th-century İzmir house include the knowledge of both locals and the imported ones. Traveller and writer Francis Vyvyan Jago Arundell wrote in 1834 "The wooden framed house, though gaudily painted without, was considered the indispensable protection against the desolating earthquake, which might occur once in a century, but against the fires of every day, stone was never thought of."[41] The development shows the adaptation of the advancing building techniques and the negotiation on usıng the materials against the fires. A modernist understanding has been developed through mass, serial, and faster production that created more rational building systems.[42] For instance, polygonal stones that were used in station and workshop buildings of the Aydın-İzmir Railway, was rapidly applied in the houses on Punta. The non-human agency of this development of the row house was seemingly the Aydın-İzmir railway construction in the region.[43] The building of the station itself, consisting of station building workshops, hangars, house for officers and others social places, is a turning point for applying the advanced building techniques imported from the Europe. It was the first project that had informed the further building techniques in the city.[44] Iron beams have been used in the new houses right after the application in the service buildings of the station. Standardized and mass building materials were often produced in the factories [cast-iron factories, iron foundry] that were established after the Alsancak Train Station project began to be realized. In these factories cast-iron console under the balconies called *cumba*s, door knob, tiles (*karosiman*), iron beams, nails were produced.[45] Maltese bricks and cast-irons have been ornamented to emphasize the class differences of the residents.

The building guild of the Ottoman Empire secured the house typology, its spatial organization, development and diffusion in the Ottoman Empire. The building in the vernacular architecture was based on the stone masonry and wooden frame traditional structures. In the building guild and buildings, the artisans and their craftsmanship were important in architectural and urban design.[46] The Ottoman Empire initially set its craftsmanship by benefitting from the inherited knowledge on the building technique since the middle ages that were developed in Balkans, Cappadocia and Syria.[47] The Ottoman Urban Culture was a result of cross-cultural exchanges between the regions. For instance, Masons, stonecutters and carpenters from Anatolian and Balkans.[48] Stonecutters were from Kayseri, Konya and Aegean Islands, whereas carpenters were from the Balkans, Pontus region, Macedonia, and Anatolia's wooded areas. The multinational and multi-ethnic, multi-religious structure allowed master-builders to work and produce together. Meaning, Turkish, Greek, Rhodopean, and Pontus carpenters, Albanian, Armenian and Walachian hydraulic craftsmen worked together in the building site for the construction. The master builders designed public and private buildings.[49]

5. Conclusion

The concept contact zone provides a deeper understanding for studying architectural, spatial, and social productions, particularly in port cities. Moreover, it shines a light on unseen patterns that triggered, fostered, or inhibited architecture and urban interventions. As the case of İzmir house has shown, the co-existence of the East and West were dependent on the macro and micro levels of the entangled contact zones. Exploring contact zones at macro- (political, economic, technological) and micro-levels (social, spatial, and cultural developments within the given situation) provided a detailed understanding of the building as a social, cultural, economic, and political constitution. These contacts were manifold, as also their relations with one another. Technological, economic, and political developments that occurred simultaneously allowed the emergence of multiple situations in İzmir. The 19th-century house is one of the situations that occurred within the condition. Treaties and agreements defined taxation, land ownership, and land use. Besides the provided frameworks for developments, encounters between social groups were of great importance to enhancing the capacity of the cross-cultural exchanges. In other words, the situations were bound with treaties, legal frameworks for the obtained rights. But the unique character and outcomes of each situation depended on social groups and their interaction with one another. The acceptance, rejections, negotiations and co-existence occur within this frame. In this respect, investigating different situations through the lens of contact zone may bring different underlying patterns of the intertwined history.

Notes

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3 Akcan, E. (2005). *Modernity in Translation: Early Twentieth Century German-Turkish Exchanges in Land Settlement and Residential Culture* (Doctoral dissertation, Columbia University).
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6 Mary Louise Pratt, "Arts of the Contact Zone," *Profession* (1991).
7 Tom Avermaete, Maristella Casciato, Yto Barrada, Takashi Honma, and Mirko Zardini. *Casablanca Chandigarh: a report on modernization.* Canadian Centre for Architecture; Park Books, 2017, 45.
8 Ortiz, Fernando (1947), *Cuban Counterpoint: Tobacco and Sugar*, Durham, NC: Duke University Press. An important quote is: "I am of the opinion that the word transculturation better expresses the different phases of the process of transition from one culture to another because this does not consist merely in acquiring another culture, which is what the English word acculturation really implies, but the process also necessarily involves the loss or uprooting of a previous culture, which could be defined as a deculturation. In addition it carries the idea of the consequent creation of new cultural phenomena, which could be called neoculturation."
9 Avermaete, Tom, and Janina Gosseye. "The Travelling Type: How Buildings and Practices Migrate Across Cultures." In *Acculturating the Shopping Centre*, Routledge, 2019: 164-173.
10 https://www.merriam-webster.com/dictionary/acculturation
11 Avermaete, Tom, and Janina Gosseye. "The Travelling Type: How Buildings and Practices Migrate Across Cultures." In *Acculturating the Shopping Centre*, Routledge, 2019: 169.,
12 Taniş, Fatma, and Carola Hein. "Space, Representation and Practice in the Formation of Izmir During the Long Nineteenth Century." Migrants and the Making of the Urban-Maritime World: Agency and Mobility in Port Cities, C. 1570–1940 (2020): 48
13 Panzac, "International and Domestic Maritime Trade in the Ottoman Empire During the 18th Century."
14 Reşat Kasaba, "Treaties and Friendships: British Imperialism, the Ottoman Empire, and China in the Nineteenth Century," *Journal of World History* (1993). p. 218.
15 Ibid. p. 217.
16 Sait Açba, *Osmanlı Devleti'nin Dış Borçlanması, 1854-1914* (Afyon Kocatepe Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, 1995). p. 34.
17 Mübahat S. Kütükoglu, *Osmanli-Ingiliz Iktisâdî Münâsebetleri: I (1580-1838)* (Türk kültürünü arastirma enstitüsü, 1974). p. 176.
18 Jim Wright, "Ports and Maritime Networks in the Mediterranean: An Archaeological Perspective," Bryn Mawr, Bryn Mawr College. (2008). cited in: Carola Hein, *Port Cities: Dynamic Landscapes and Global Networks* (Routledge, 2011).
19 Carola Hein, Port Cities: *Dynamic Landscapes and Global Networks* (Routledge, 2011). p. 5.
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26 Çıkış, "'Modern Konut' Olarak XIX. Yüzyıl İzmir Konutu: Biçimsel ve Kavramsal Ortaklıklar." p. 216. [Seniz Çıkış, direct translation].
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31Emiliano Bugatti, "The Contribution of Luigi Storari to the Analysis and Development of the Levantine Urban Fabric," in *Italian Architects and Builders in the Ottoman Empire and Modern Turkey: Design across Borders*, ed. Ezio Godoli Paolo Girardelli (Cambridge Scholars Publishing, 2019). in Paolo Girardelli and Ezio Godoli, *Italian Architects and Builders in the Ottoman Empire and Modern Turkey: Design across Borders* (Cambridge Scholars Publishing, 2019). p. 64.
32 Bugatti, "The Contribution of Luigi Storari to the Analysis and Development of the Levantine Urban Fabric." in Girardelli and Godoli, *Italian Architects and Builders in the Ottoman Empire and Modern Turkey: Design across Borders*. p. 64.
33 Bugatti, "The Contribution of Luigi Storari to the Analysis and Development of the Levantine Urban Fabric." in Girardelli and Godoli, *Italian Architects and Builders in the Ottoman Empire and Modern Turkey: Design across Borders*. p. 64.
34 Stefanos Yerasimos, *Quelques Elements Sur L'ingenieur Luigi Storari*, Architettura E Architetti Italiani Ad Istanbul Tra Il XIX E Il XX Secolo (Istanbul: Istituto Italiano di Cultura di Istanbul, 1997). as cited in Bugatti, "The Contribution of Luigi Storari to the Analysis and Development of the Levantine Urban Fabric." in Girardelli and Godoli, *Italian Architects and Builders in the Ottoman Empire and Modern Turkey: Design across Borders*. p. 64.
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48 Maurice Cerasi, *Late-Ottoman Architects and Master Builders,* 1988, 87-102: 89.
49 Maurice Cerasi, *Late-Ottoman Architects and Master Builders,* 1988, 87-102: 89.

Image Captions

Fig. 1. The 19th-century İzmir house (İzmir Konutu), (source: Dinçer, Kaya, Daniel Goffman, and Doğan Kuban. İzmir ve Ege'den Mimari Izlenimler - Kaybolan Bir Geçmişten Görüntüler. 1994).

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Biography

Fatma Tanış (Dalyan, 1990) trained as an Architect in Istanbul and Stuttgart. She holds Master's degrees in Architectural History (ITU), and Restoration-Evaluation of Historic Urban Sites (MSGSU). After living in Bodrum, İzmir, Porto, and Hamburg, where she deepened her interest in port cities, she has started her doctoral research on port city culture in İzmir in the Department of Architecture at the Delft University of Technology. Building on her interdisciplinary background, she has explored her home city Izmir from the cross-cultural perspective.

Minor Architecture as Major Architecture

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Abstract

Based on a supposed conceptualization found in Manfredo Tafuri on the notion of "Major Architecture", which only appears only in one of his books and in a way not explicitly developed, a whole series of authors compare the openings of a contrary notion, "Minor Architecture", which would serve to counteract the excesses that the discipline has historically perpetuated. In particular, the term "Minor" goes back to Deleuze/Guattari's interpretation of Kafka's work as "Minor Literature".
The temporality of the discussion between a major and a minor architecture starts in the field of the relationship literature/architecture in the American universities, at the end of the 1990s within the peak of the deconstruction. It should be remembered the definition of *différance*, where an economy of oppositions scans our language, as Derrida wrote. Jennifer Bloomer is the first to see such a concept "Major" but, in our opinion, with the little development that Tafuri makes, compared to others such as "incomplete architecture", it does not justify the comparison of all those who did not doubt that Tafuri developed it. From J. Stoner's book (2012) to the epigonal comparisons of courses at Yale (2015), with respectable academics such as F. Scott or J. Till, they have aimed to move from the minor in the literature to any other ways of making in culture, that deconstruction of the architectural sense.
Following a genealogical review of the writings that are linked to each other with the same fragile foundational condition in Tafuri, the aim is to determine if there is a weak argument and to evaluate the possibility that the lesser is comparable to the greater, for its usurpation. At the same time, we intend to elucidate whether when "architecture" is spoken of, it is understood on the contrary it is "space" and to promote an extension to counter-spaces and heterotopias.

Keywords: Major Architecture, Minor Architecture, Deconstruction, Architectural Research, Oppositions.

1. Introduction. On the insufficiency of the comparative. Even beyond the "Tertium datur"

If an expression had to be chosen to admire the manifestations of the human, and to fathom the ecstasy of the spirit, high on the list of those chosen should be that of looking up to the sky. If we were to be satisfied with this choice, we would be judged accordingly for a verifiable detachment from a reality that implicitly dissatisfies us, seeking a compliment by expanding our earthly life. Such a judgment has the appearance of obeying the –mythical– laws of those who feel that one must have one's feet on the ground, and the sentences that one would expect would be reproachful towards those who violate them by raising their heads. But it is not that simple to look at. The comparison between those who raise or lower their heads is the history of thought. And it has a courtroom –to the astonishment of some– where one can decide whether to look up or down, in the Vatican. The painter Raffaello Sanzio outlined philosophy when he painted Natural Truth in "The School of Athens" (1509-1510). That mural painting in the Room of the Segnatura has a focal point in the center, under the keystone of the vaulted arch that frames the in-depth perspective of civil architecture –perhaps a bathhouse– interrupted by the presence of a couple of philosophers. On the left, which is the right in the direction of the route taken by these two men as they move forward in the scene, there is an old man with his arm raised and his index finger pointing upwards. By his side, a younger man gestures with his outstretched hand containing anything that tries to rise from the ground. The first is Plato; the second, Aristotle. One is idealistic; the other, empirical and mundane. This is how the differences between the two have repeatedly been described and, from their intertwining there unfolds the development of Philosophy. It is strange, however, that this Plato is painted as if he were Leonardo, a man of science, who looked up to heaven, but to conquer his order. It is understandable if we think that Raphael's time is expressed as Plato's, incarnating his socio-political and cultural reality, for which historical readings are distorted, while simultaneously being critical (at best) of reality. We will now go on to consider whether it is legitimate today to distort our time, that of capitalism, which is pandemic and has environmental limits, by means of a global proliferation of minor actions of resistance. If an architect were to appear in the Vatican fresco, he would be characterized as Franz Kafka.

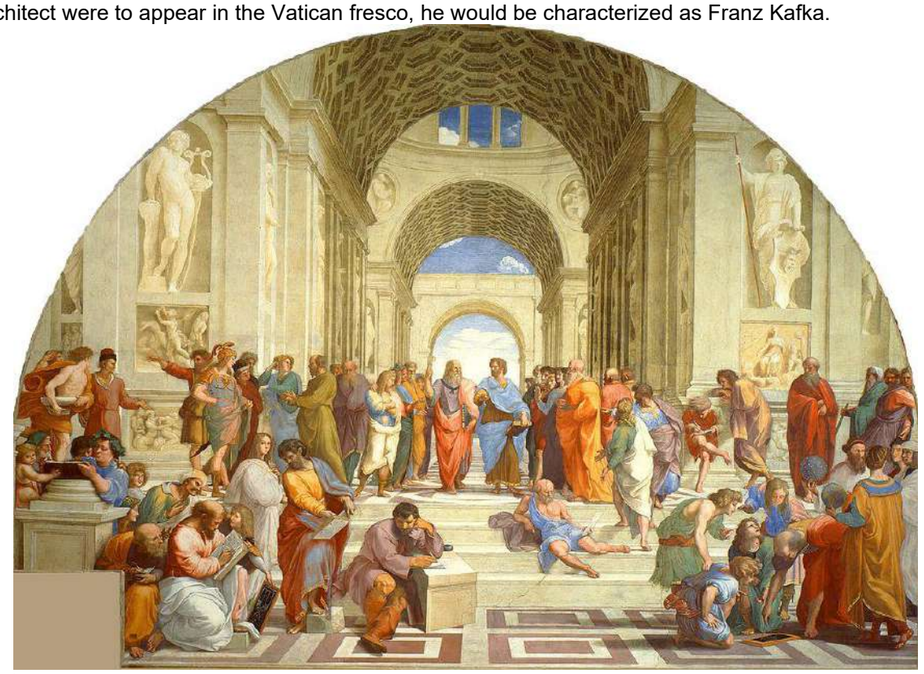
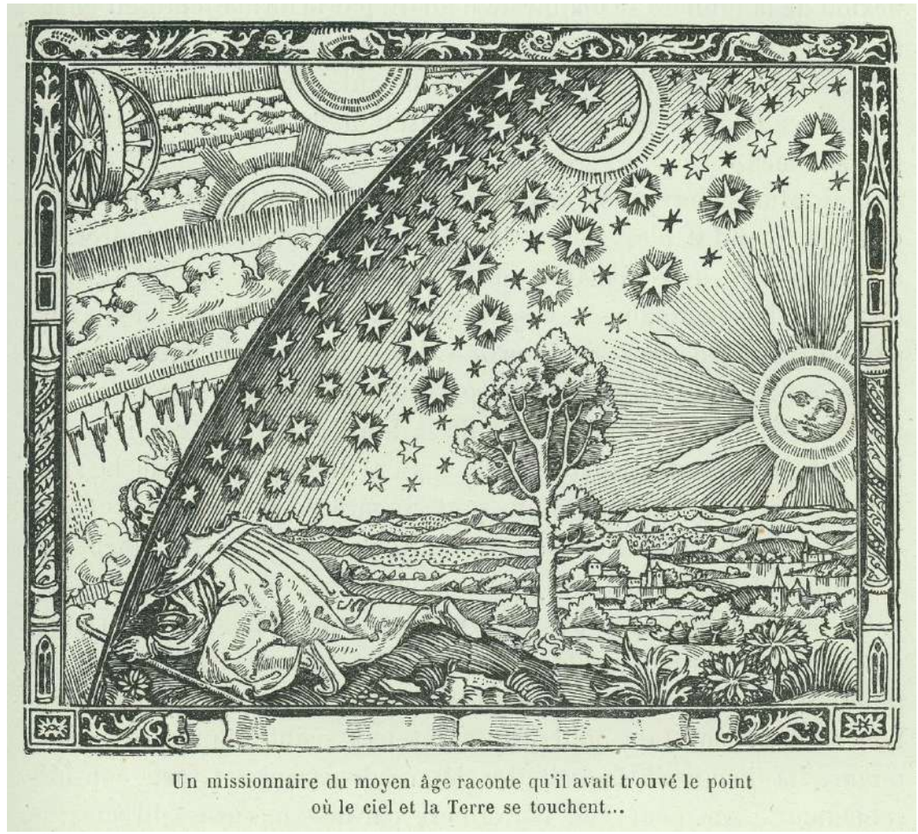


Fig. 1

As it happens, for those Greeks, such a story was a deviation from order. For them, what exists in purity (morality, a regulated *polis*, the order of the State, of the Nations...) is the *perihodos*, and its history is the changes of the sky within an order. Gadamer says that there is no thinker who manages to see the being of human existence other than from the invariants of the human being. His historical account is a misdirection of such indelible orders, as well as being 'the inextricable element of human disorder in an ordered whole' (Gadamer, 2004:138). The struggle between the oppositions order/chaos goes back a long way: The ancient Greek concept of chaos (from a root meaning "opening") signified a primordial formless space that existed before the appearance of earth and sky (Hesiod, Theogony).

It is important to remember that when the Enlightenment came, a man of science was characterized by the fact that the Atlantean twin who held the sphere of the *Ouranos* had already been relegated to the basement of obsolete objects. The manifestations of the human, sometime after Raphael's fresco, when looking at the sky, misuse the eye that commands because, although they look up with their heads back, they want to find their feet. It, therefore, follows that the earthly sphere had to be left behind the head of the Atlas (the Farnese Atlas, one of the best known), the other twin of the *Ouranos*, in order to force the philosopher to keep his gaze down however eager he was to lift the world. And historiography, as a scientific method, also covered human manifestations with a mantle of unity (as if it were a "motionless sky"), until Foucault (The Archaeology of Knowledge: 217, 322) lifted such a veil so that investigation would consist in discovering the deviations, gaps, independencies, autonomies, that lie beneath historical units. So, it can be said that the eyes are the organ of philosophy par excellence, since, according to Sloterdijk (2003:145), thinking would be a dialectic of the eye, seeing oneself seeing.



Un missionnaire du moyen âge raconte qu'il avait trouvé le point où le ciel et la Terre se touchent...

Fig. 2

To admire the sky, as a confirmation of the astonishment of human facts since Anaxagoras, is a task –and a cause for controversy– shared by language and by its otherness, literature: sky as remission and recurrence of nostalgic feelings; second-hand sky, as in Murakami's "A Wild Sheep Chase"; sky as a geometrizing and cut-out frame of intermediate layers in which to stop before letting oneself go completely in (almost all) the "Oblivion" of Foster Wallace; skies only visible on the horizon, as a limitation of the given, in Calvino's "The Road to San Giovanni"; onerous skies as in Joyce's "Dubliners", which threaten to come tumbling down transfixed upon our heads, in a certain sense similar to Beckett's, as skies that fall on us in the form of the tremor of the night ("Waiting for Godot"). Ground-skies, beautiful, all of them. Nevertheless, the risk of depositing the beauty of human facticity in speech or in writing is recognized when one resorts to literature detached from its time to preserve its statutory framework (Cusset, 2005: 62) and using the armor of a theory, a strong one, like all theories. The Foucauldian card of "what does it matter who is speaking" cannot be played as a joker if, granted by the license of sliding, it is used to legitimize a non-co-responsible time, which happens with the multiplication of the minor in all disciplinary fields. We would say with Martin Jay (1993:314) that,

were we to continue following Foucault's trail, which it is still worthwhile to do, in order to be able to speak of the minor thing, we should concentrate well on what we said earlier regarding the dialectic of the glance –to look while we are looking– because it is fair to recognize the capacity of the visual experience as resistance. And Foucault, wanting to denounce the panoptic imposition, wore a "hegemonic ocular device" that did not show the micro-practices of resistance against power in everyday life. Incidentally, as an apostille and as a testimony of our pandemic time, the difference established by Foucault in "Surveillance and Punishment" within the disciplinary program between the stinking city and the panoptic establishment would now be branded as impossible. In the exceptional case of an epidemic, power rises and constitutes the counter-city with a perfect society, of ideal functioning, sustained by a simple ideology: life against death. The panopticon, on the other hand, was invented to stay in control of daily life. These two are Foucault's comparative poles. However, while writing these lines we believe that there is no transience, that is, the panopticon has found its best formulation for the control of micro-practices due to the permanent state of exception that is and will be from now on the fight against viruses.

Sliding through the sky, unbound from the ground, to expand its *noosphere,* has to be a subtle break (against the iron theorization), which does not occur because of the magnificence of a mythical bird, but because of the transcendence of the raised eye, of a worldly being, of an idealist who pushes his body to disrupt things by destroying himself for his pure contradiction made existence. It is not a matter of sliding through the sky, that feeling of ecstasy that is the fracture through which to rid oneself of the dominant ground represented by the *Flammarion* engraving of 1888 but of sliding the sky, as Kafka did.

Kafka, of whom his friend Scholem said that his texts were the perfection that destroys, canceled the duel of binary oppositions with one of his Aphorisms (Bloom, 2002:276):

The crows claim that a single crow could destroy the heavens.
This is unquestionable, but it does not prove anything against heaven, because heaven means precisely the impossibility of the crows. (Blue Octavo Notebook, 62)

No literary tinsel in Kafka, which in Czech is pronounced to sound like *kavka* (Bloom, 2002:276), a rough bird like a rook or a raven. Kafka, therefore, is more crow than Jeanneret-Gris, coming from an onomatopoeia, if writing as a mortal provokes the envy of the gods, more than those commoners who wanted to imitate the omnipotence of the deities from the start. For Kafka, Deleuze and Guattari wrote an essay entitled "Toward a Minor Literature". For himself, wanting to behave like the gods, Le Corbusier wrote: "The Modulor" in two volumes[1].

This text wants to separate itself in some way from those that have dealt with the minor –obligatorily in writing, still *logocentric* and, for some reactionaries of the *philosophy of difference* (Cusset, 2005:25), *suspicious* and *pragmatically* harmful– in the last 30 years. We could say that *the minor* takes the place destined to the *major* but it overcomes the traditional elective dichotomy. A second assumption would be to add that since the initial Platonic dialogues there is a correlation, common ancestral blood, as Indra K wrote. McEwen (1997:2), between the emergence of philosophy and architecture, between the ancestor of Socrates, Daedalus –at that time, the first architect– and speculative thinking. In the end, thinking and feeling[2] are prepared in the architectural action and it is the polarity by difference from which we have started. It could well be that the etymological separation that goes from *lithourgos* to *leitourgia* deserves a detour for a proper approach. The former means stonemason, the one who grants the form, and the latter is liturgy, the order of celebration of the religious rite and, beyond that, public service.

If there is a possible philosophy, and these are Derrida's terms, it is defined as an *episteme,* and this concept must be understood as the functioning within a system of essential obstacles, of conceptual oppositions, outside of which it becomes impracticable. Plato already ruled out that *epistēmē* and *sophia* have anything to do with skills. The episteme in Daedalus is the uncertain, that elusive element within the knowledge of experience as a gaze (McEwen 1997:126). We turn to his myth recurrently with the hope of not obliviating that there is a part that ritualizes, historicizes, periodizes, unifies, in all architectonic action that is erected upon a solid bastion in its time[3].

2. Towards an architecture, from literature born as philosophy

It should be noted that there are many reasons that explain both what has been said so far and what should implicitly be found in those same paragraphs. Although our era is marked by transdisciplinarity, by the logic of the Law of included middle, by gradation and phase, by the relational, it cannot pretend that everything achieved in understanding by the comparative way has nothing to do with it. Thus,

Plato versus Aristotle, reason versus unreason, theory and practice, science and spirituality, the significance of looking upwards or downwards no longer leads to decision-making by exclusion, but its historical updating provides us with a drift that prevents the stability of any of the poles in dispute, and of the dispute model itself. An ocean of difference emerges, we might say (Tapia & López-Marcos, 2014: 634).

In the brief display of representative epithets that we have drawn upon an introductory basis, we also present the general hypothesis of this paper, which must be understood in this process of distortion or drift: The minor gives architecture a chance to be tied to morality rather than an ethic for times when crises are permanent and architects' responses merely remedial. Making architecture in the minor abandons action in order to better "consist": Kafka says he does not like literature, but that he consists of literature. Therefore, if it is a matter of comparison, better Kafka than Derrida, better Kafka than Le Corbusier, establishing two affinities that are not elective, but rather the coming and going between them creates a vibration which could cast a ray of possibilities for the redefinition of the status of architecture.

Meanwhile, the very form of our introductory paragraphs, with a modest literary intention, is a tentative exercise that delves into the significant structures which do not name but rather reveal an attitude and an epochal recognition, and, most importantly, this refers to an epoch that is not the present one, as we will explain later. Despite the need for a comparison of formal expression of literary genre, a distancing has been sought that will be perceived by those who were, like us, in the classroom one way or another (Tapia, 2019) a couple of decades before the beginning of the 21st century, fascinated by the amphibologies of "not yet and almost already". Reading Peter Eisenman at that time caused a sort of implicit acceptance of a language of domination whose cloning was emerging complicitly and undoubtedly among members of a select clan, on both sides of all the earth's oceans. Once the workings of the literary springs had been grasped, any follower could think that Joyce or Beckett were textual spaces to be architecturally projected by stylistic aggregation (written rather than drawn) with a great lack of sociological and psychological references that these particular writers never neglected. But it is a question of time in the sense of the epoch that each one exhibits in its becoming, oedipally or, anti-oedipally[4], as it will be important to point out with respect to the minor based on the crucial reference that is the book on Kafka by Deleuze and Guattari. In the 1960s in France, the education of architects by means of architectural theory not only did not exist but faced outright rejection (Cusset, 2005:248). As written by Hanno-Walter Kruft (1985:731), the Theory of Architecture was established in the Schools of Architecture after the '70s and today their departments still hesitate to treat it as a history of architecture or as methods of composition or go so far as to force its closure to mark a *perihodos* following which project thinking prevails rather than ideas of supposed unity and fashion, such as the linguistic, the deconstructive, the informal, the critical, the historical post-operational, the post-critical, the diagrammatic, the project-narrative, etc.

Our reflections, with the presentation of the project of the architects Flores & Prats for the Beckett Theatre in Barcelona, will conclude that the possibility of a Minor Architecture[5] in our time is not negligible, but that its emergence from the departments of Theory of Architecture transformed into departments of Comparative Literature[6], mainly in the United States and under the (historical!) intensity of the lustrums between 1970 and 1995, has naturally required the maintenance and enhancement of a Major Architecture for its existence by comparison.

3. The minor in architectural discourse

After these decades, we have sought to return once again *toward* Kafka's readings[7] by taking charge of these legacies, which have already been patrimonialized, in the face of the disadvantages of relying on the desire for appropriation from deconstruction for a formal architectural justification, despite this causing *reterritorialization* in the sense of Deleuze, as we already know from the repose of the years following its rise.

After Le Corbusier wrote, "Toward an Architecture" in 1923, where the programmatic bases of modern architecture proposed are vehemently accepted with worldwide fervor, in 2012 Jill Stoner's "Toward a Minor Architecture" was published. In this time span of almost a century, the comparison between the two titles is not a matter of chance but of intention and clear response. The opposition is manifest, the denunciation for the achievement of the cancellation of a *perihodos,* verifiable. Stoner argues that minor architectures are ephemeral by necessity, "They […] slip through cracks of Euclidean convention, and pay no heed to the idea of the formal". She adds that the previously prevalent material gives way to the immaterial. The form does not happen, it dissipates. And, with a certain conclusive hesitation, she suggests that "The subtle aesthetic within these spaces will likely evade even the trained eye of an architectural photographer, though a canny journalist may be able to track the intricate relations of its existence, which are wrapped up in time." (Stoner, 2012:2).

The correlations between this architectural thinking and deconstruction are obvious and Stoner does not hide them, even though her book is not intended to be a philosophical appendix, nor can it be said that this book is a clear specification for architectural action. We find in Stoner connections with Derrida who left her clues or traces to follow, as in "I do not write without artificial light". The idea would be, and there have already been attempts in the twentieth century, to create a different form of life, says Derrida. In order to do this, old conventions cannot be accepted, whereby the project plays a dominant role in everything it touches. To move towards a fundamental renewal in the relationship that goes from the plane to space, one cannot start from scratch, from "an absolute objectification"; one has to establish a parallel from the labyrinth of Daedalus to the Tower of Babel with our time. And the French philosopher states: "Here too, the sky must be conquered in an act of eponymy, an act that remains inextricably linked to the mother tongue". Eponymy is understood as the act of naming periods after the rulers who occupied their office during that time. Mother tongue, incidentally, is not the dominant language, but it is prevalent, it is not greater, we could say, and advocates a very different comparative analogy with the divine, abandoning those of the Greek and Christian deities, etc. From that tongue, Derrida insinuated that the basis for architectural thought would emerge. The exact phrase (Derrida, 1999:136), with his head, held high, was: "*perhaps architectural thought does not exist; but if there were to be one, it could only be expressed in the dimensions of the high, the supreme and the sublime. Seen in this way, architecture is not a question of space, but an experience of the supreme that would not be superior but, in a way, older than space and, therefore, is a spatialization of time*".

Stoner finds in the affection that his literary readings transmit to her the inspiration to spatialize the experiences of her biographical or fictional "characters". Her parallels run through a set of examples from which she tries to show what architectural consistency is, leaving the practice of architecture itself to perceive its sacrifice. Thus, the eyes that are behind two peepholes in the cells facing each other in the same corridor of a prison for the repression of opponents in Videla's Argentina, some hawks reterritorializing the heights of the skyscrapers every time they are expelled from their natural habitats, the creative ruins of the consumed Detroit, or the Cheever swimmer redrawing with each dive into the pools of his county the way back home, are the spatializations of the minor that show resistance, the necessary counterweight to understand what must be consistent, in architecture.

4. Consisting of philosophy, like consisting of literature, like consisting of architecture

The architecture of and for resistance using a minor language: That is the challenge. In an unpublished lecture delivered at the School of Architecture of Seville in the years of the apogee of deconstruction in architecture (1993) by Spanish philosopher Mariano Peñalver (one of the most experienced scholars and translators of Derrida's work in Spain), he defended that if architecture could be diagnosed according to the epistolary exchange of a few years between Derrida and Eisenman as the last "fortress of metaphysics", deconstruction would be the attack on that fortress. Peñalver cleared up the fallacy that deconstruction is the destruction or a philosophical or discursive metaphor of architectural demolition. Finally, he defined deconstruction as "the economic, strategic and sober resistance to the solid resistance of the stone fortress that houses and legitimates a nostalgic, teleological and beauty-filled dwelling." With perhaps excessive optimism, he said that deconstructive thinking in architecture promoted without naivety and without axioms, an inventive architecture, or, more splendidly: "the repetition of the invention of architecture".

This challenge of the repetition of the invention of architecture, which is taken up by Stoner, who teaches Contemporary Space Theory in relation to contemporary fiction and poetry at Berkeley, and is director of the Azrieli School of Architecture and Urbanism in Ottawa, embodies some particular foundations that must be taken into account.

Stoner met Jennifer Bloomer when she was director of the architecture degree program at Iowa State University and a member of the Chicago Institute for Architecture and Urbanism[8]. Stoner had already read Bloomer's 1993 book "Architecture and the Text: the (S)crypts of Joyce and Piranesi" where there is a short entry entitled "Minor Architecture" that establishes the relationship between the major and the minor in architecture from Tafuri:

The concept of minor architecture is adequately deduced from Manfredo Tafuri's concept of "major architecture" and illegitimately appropriates Gilles Deleuze and Félix Guattari's concept of minor literature. (Bloomer, 1993:173)

The repetition of the invention of architecture in Stoner's book is not a degree zero of architectural action, but a differential appearance, though always correlated with another established, pertinent but dominant, major architecture. This definition can be compared with other authors who, like Cindi Katz,

have been maintaining a *minor theory* in their work, from the same decade of the 90s to the present. For us, and not for Katz, the absence of a major architecture dissolves any possibility of the existence of its reverse, the minor, since its mission according to her is to resist, re-elaborate, and undo hegemonic social relations and practices. If her assumption is utopian, ours comes from simple logic. Nothing can be made minor without having reached a peak previously.

Both Bloomer and Stoner trained as architects in the years of post-structuralist counterbalancing between philosophy, literature, and architecture, and as teachers, they maximize the capabilities of those transfers in their lectures by observing how minorities in literature operate, subverting a language from within. Stoner goes so far as to say that "a work of minor architecture is architecture in its most literary mode" (2012: 12). And that is Kafka in the learnings taken by these two women from reading Deleuze and Guattari's "Toward a Minor Literature". A Czech writer in the German language who drags his origin within a system of dominant oppositions that are therefore evident, who avoids history as a destiny, which is highly political but is neither imaginary nor symbolic, but lacks interpretation, without meaning, recognizable only as protocols of experience (Deleuze & Guattari, 1975:17).

5. Minimizing the minor. Controversies

Bloomer must be attributed to the role of insurgent if we can illustrate her attitude with the paradigmatic literary examples of her theses, such as "Les Guerrillères" by Monique Wittig. In a text of extreme difficulty of understanding, in accordance with those obligatory comparisons of the most deterritorializing writers, such as Joyce or Beckett (Bloomer, 1992:52), she says that Eisenman is right: "architecture will always resemble architecture". However, for her this resemblance is precisely what must be questioned through an architecture of desire, which is the other way of naming the minor, delving into the interstices left by the major. An architecture that emerges as a bastard, by overwriting the hegemonic one. Architecture as an inscription surface, in which its processes bleed by scratching. And she allows herself to end the paragraph, like a pure hemorrhage, with a laconic "KAFKA".

For us, 30 years after the first open wound in architecture caused by the *narration* of the minor by Bloomer, this scatological fascination can only mean one of two things. Either that reaction was necessary as a counterbalance and its mission are not over, or it is a surrender of the good ones left by some acolytes, out of ignorance or contempt, fighting on their own.
In the first case, one would have to know against whom one was fighting then and against whom now. The spark was this phrase of Tafuri's that has to be inserted here in its most extended excerpt:

"Architecture, from an absolute object, becomes in the landscaped context, relative value: it becomes a medium for the description of an edifying play. The Gothic, Chinese, Classical and eclectic pavilions inserted in the texture of a 'nature trained to be natural', are ambiguous objects. They allude to something other than themselves, losing their semantic autonomy. It is the same phenomenon that, a little later, will move into major *architecture, that will explode in the period of eclecticism and be recovered in the expressionist (or quasi-expressionist)* bricolages *of Gaudi, Poelzig, and the* Wendingen *group, that touches the first Wright and the Californian school of Maybeck and Greene & Greene, and that the Bauhaus and* l'Esprit Nouveau*, from opposite sides, will try to contain. But it is also the same phenomenon in which we are again immersed".* Theories and history of architecture. M. Tafuri. pp.100

Certainly, the quote does not seem long enough to pick up the ax of war and slay it with reasons. Reasons, there were, but the fact that this quote was the spark produces a certain perplexity in us. Firstly, because Tafuri made new concepts out of standard terms, reviving them politically, which were used profusely by the academy from then on, such as those described by J. Till,[9] who is one of the most complacent reviewers of Stoner's book. We have not found in all of Tafuri's work development of this idea of a Major Architecture. If it is implicit in the context of those years, the –mythical– use of Tafuri would be like a mere legitimizer: major, in the defense of minor. The curious thing is that no one, not one of those who have used this reference, investigated further. Stoner hides in Bloomer, in a mention quoted in a note at the end of the chapters of her 2012 book. This was done by those who wrote before her, but also by those who incorporated themselves into the oversized minor: minor urbanism, minor criticism, minor cartography, minor geography, minor risks, minor resources, minor work, minor landscapes, etc. Note that this list belongs to the titles of the lectures at the Yale Contemporary Architectural Discourse Colloquium in 2015, under the heading "Minor Architecture: Destabilizing Major Narratives".

Furthermore, as a point of controversy, it is somewhat disheartening to think that Gaudí, Poelzig, or Wright had their *minor moment,* to transfer their example to the resistance that could be given today.

In the second case, the temporal displacement generates an earthquake towards the past that would, when the wave comes back around, give the reaction a greater amplitude of sense than it had in its time. That is why we said that its contemporaneity was not clear. Like Plato portrayed as Leonardo, this would define one more symptom of dispersion and uncertainty in terms of the moment and architecture, but it would give credit to the minor action. But we have already said that such action also has to relate to the comparison with its becoming, which Stoner establishes in the revision of 4 basic myths in individual chapters: that of the object, the subject, interior, and nature. What is strange about the treatment of these myths in her book is that there is no clear reference to the moment or to the most revealing literature that highlights the architectural impulse due to the secular invariance of these myths[10]. Perhaps it is Rykwert's reading for that of nature, but there is only one mention to Lucretius in a note. And we know nothing of the myth of the interior, perhaps Platonic. The review by Bremner & Till (2012) on Stoner's book does not doubt that this categorization of the four myths has a pertinent affiliation with the history of architecture, without needing to verify its origin. The fact is that, based on them, Stoner makes it possible for minor architecture to become a playing field, for its interiors to behave like escapes, for the natural truth (that painted by Raphael) to be shown in each building through deterritorialization, and for architectural subjects to be defined by their relationships. The veil entails dissidence, but also fragility, let us not forget. It is not that we want to delegitimize this proposal of Bloomer and Stoner or of the minor wherever it is shown. Our intention is to achieve more rigorous precision. So, let us be like Bloomer in this: KAFKA.

6. Looking up with your eyes closed: doing (and not just reading) minor architecture

"I danced at 'Café Müller'. We all had our eyes closed. When we did a repeat, I couldn't get the feeling of what was new, how important it was to me. Suddenly, I realized that it makes a big difference, behind closed eyelids, if I look down or up.
That makes a difference! The right feeling comes immediately. The smallest detail matters. It's a language you can learn to read. Café Müller dancing. PINA, a film by Wim Wenders. 2013. About Pina Bausch, choreographer.

Based on some drawings that Kafka made between 1907 and 1917 (Fig.4), Deleuze&Guattari (1975:14) generate a comparison between the representations of heads bent or raised from the spaces extracted from the novels of the author of "The Castle", which also serve Stoner to extract the myths with which he articulates the possibility of a minor architecture.

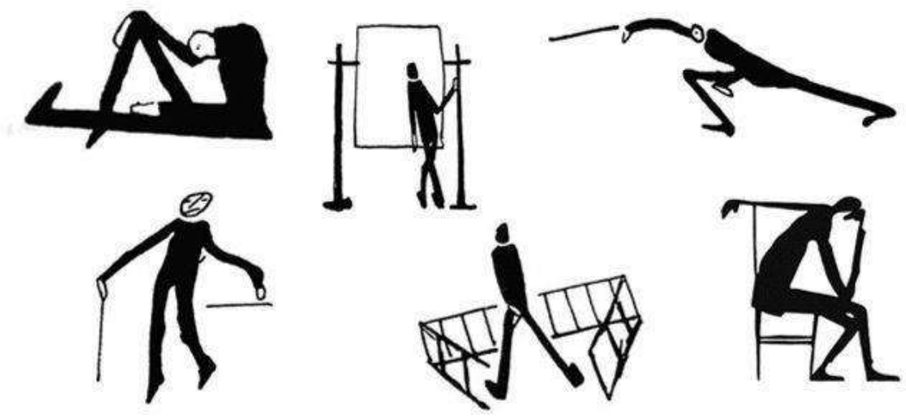


Fig. 3

head down **portrait-photo**	=wish blocked, submitted or subdued, neutralized, with minimum connections, a memory of childhood, territoriality, or reterritorialization.
erect head **sound-music**	=wish that rises, or escapes, and opens to new connections, childhood block or animal block, deterritorialization.

Fig. 4

It should be stressed that this ranking is not a finalist. There is a whole vibration from one to the other that prevents the comparison from being elective. The complete disarticulation of the notion of space by both spatial representations would make a minor architect embodied in Kafka's work understand that to look at the sky is to raise one's eyes, implying spirituality, immateriality, religion, or, conversely, that the architecture resulting from Kafka's understanding of the bent head revokes his space to be subdued, with repressions of desire. But Deleuze and Guattari do not allow the comparison to be settled in choice. It is a matter of finding the unformed matter extracted from each expression, be it music or photo so that

the opening of deterritorialization is maintained. For this reason, we rely on Pina Bausch's inspiration: behind closed eyes, looking up or down gives the right feeling. But it is not said which one it is, it is not elective.

To conclude, somewhat hastily because of the limited space available here, we would like to approach what we believe would define a minor work in architecture, in the sense that these pages have gathered from different times and authors: the Obrador Internacional de Dramaturgia, Teatro Sala Beckett, by the architects Eva Prats and Ricardo Flores. We do this because there is also a minor theatre, as Sanchís Sinisterra has said, and it is linked to Beckett himself[11]. Everything seems to be an extension of what Bloomer and Stoner said, but revised as a distortion, as this example is one of the most successful ways for the minor to appear, as a concrete architectural project action, a *work*, which is something that is missing in the texts of Bloomer and Stoner.



Fig 5.

Let us look at Figure 5. The constitution of the sky is established by the breaking of all limits. We must not look up, but if we do, we will see the architects flying like a raven who does not admit the binary, who disintegrates the comparable. We see it in the stories superimposed on the echo of the fragments *thus found* where space reaches presence. Where is the Leonardo here, in our time? He is not here to conquer an order, just as he was not when he usurped Plato's body. We will say it with the words of Juan José Lahuerta (2017) regarding this same work: the Beckett Room "*is an extraordinary exercise of recognition, which reminds me of the advice that Leonardo gave to painters: look at the bark on the trees, at the shapes of the clouds, at the patches of damp on the walls, to see in them great forms of mountains, valleys, and rivers, of characters and horses, great stories.*" To consist of architecture in Flores & Prats, in the minor that resists and expands at the same time, as Lahuerta says, elevates the work from being a commodity to being "the real thing". Perhaps, if it ever stops its inherent infinite beam of excitement.

Notes

1 This is literal: "Behold, one day, passing by the wall where the gods act, I heard. I was irresistibly curious..." Le Corbusier, The Modulor 2, last sentence on the last page of the book.

2 With the intention of avoiding a possible accusation of being simplistic by attributing the actions in conflict with feeling and thinking to the work of the architect, we will reveal that our intention is to make the debate prevail as an argument at this moment about what it is to do architecture, under consciousness and theoretical understanding or about the craft and sensation. When Goethe saw Strasbourg Cathedral for the first time, he was amazed by its beauty and frustrated at not technically understanding its compositional keys. He expressed this in writing in 1772. His conflict between reason and sensation, as described by Rykwert in "Adam's Cabin in Paradise" (1999:109), was conjured up when he questioned his mentor, Abbé Laugier, about it. Carlo Lodoli, the "Socrates of Architecture", could also have been the object of his denunciation. The vision of the cathedral, at the same time in ecstasy and uneasiness, made Goethe exclaim that heaven should provoke this same duality and he gave the architectural disciplinary body the task of the future: "Multiply, pierce the gigantic walls that you must raise against the sky so that they ascend like sublime and leafy trees of God, whose thousand branches, millions of leaves and twigs ... announce the beauty of the Lord, his owner...". Much earlier, and Goethe (who, by the way, is recognized as the founder of modern comparative morphology), could have reconciled himself with having thought about that first modernist who was Brunelleschi, who clarified by replacement the Gothic emphasis in the Pazzi Chapel in Florence through a mystical vision of Heaven but with a rampant lucidity of rationality from history and geometry (Chakraborty, 2014:42).

3 Maybe that is why both J. Quetglas and B. Colomina wanted to propose Ariadne as the first architect. Their attempt is co-responsible with the spirit of the Daedalus, although the argument is weakened by being shown as a ranking, when in fact it is not necessary.

4 According to Deleuze and Guattari, oedipalization constitutes an illegitimate limitation of the productive syntheses of the unconscious, because it emphasizes 1) global persons, thus excluding all parental objects of desire, 2) exclusive disjunctions, thus banishing the subject to a chronological series of moments to which a coherent narrative can be given, and 3) a segregative and biunivocal use of conjunctive syntheses, thus reducing the subject's identity to a coherent or static set of one side in a set of oppositions.

5 For those who are interested in studying architecture in-depth, we would like to point out that our research has been based on our work as professors in the Master's Degree in Sustainable City and Architecture at the School of Architecture in Seville, Spain. For the subject that seeks to train our students in research, we proposed that they spend one academic year working on the concept of "Minor Architecture". This research, shared between professors (J. López-Canti, F. De la Iglesia, and C. Tapia) and students, has given excellent results that have been uploaded to Wikipedia for international debate in Spanish. It contains the genealogy of the term in different authors and texts that we have used here, except without that traceability as an argument, but as necessary sources, at the end of this paper. For more information, see the article "Devenir menor en lo arquitectónico: politización y potencialidades de resignificación espacial" in Thema, 5. FADU Montevideo, November 2020, signed by the participating students.

6 Note here that it is not only a matter of finding out, in order to evaluate the extent of the dissemination of so-called *French Theory* in American literature departments, which of them changed their study programs but also of tracing the training of the architects who later took charge of the development of the most influential architectural theory in the United States and abroad. Many of them had been trained with teaching programs coming from Literature, in institutions that did not train architects. Michael Speaks, for example, dean of the Syracuse and Kentucky Schools of Architecture, among others throughout his career, studied literature with F. Jameson at Duke, in a program where Terry Eagleton S. Žižek, Franco Moretti, etc. also taught. Speaks, interviewed by Mitášová (2014:358) recalls that, in those years, philosophy was basically analytical, incapable of generating theory, and that French poststructuralist thought entered North America through these departments in Literature. According to Cusset (2005:90), as philosophy becomes literature, literature becomes a mere parcel of theory. This process of indistinction of the literary and philosophical corpus was not immediate and, moreover, required the institutional apparatus of, among others, the first interdepartmental research institutes, or the regroupings between campuses, such as the influential School of Criticism and Theory, in Irvine.

7 Architectural attempts since Kafka's readings have been many. Bofill, for example, made several attempts that should be considered the best of his prolific and contradictory career. But for us, to look to Kafka means to pull back the growth around him to see his primordial stem again.

8 1988 is a unique date for the establishment of Theory within the schools of architecture. In an event organized by this Institute and published by the magazine Assemblage, all its participants declared themselves to be theorists of architecture, neither architects who write nor critics, nor historians. Two years later, the MoMA was already holding a symposium on architectural theory and practice, consecrating it. Jennifer Bloomer was one of the speakers.

9 See, "Architecture depends", lo-fi architecture concept versus hi-fi architecture. It is obvious to point out the presence of the thesis of the minor confronted with the major also in this work.

10 In Mythologies, Barthes says that the myth brings clarification, though not quite an explanation, which is what Stoner could argue to justify the way she resolves the matter without naming the origin of the selected myths. However, Barthes goes on to say that myth is also a statement of fact, so the internal record must be made visible at some point. Lebbeus Woods worked with these myths, as did John Hejduk, and they can be reconstituted from their acerbic oral narrative traditions where beings that embody nature or the human condition exalt it to make the characters extraordinary beings and unique architectural resolutions.

11 "*As opposed to the notion of the character as something compact, a more or less schematic transcript of a complete human being, representative of a certain sociological or psychological archetype, minor theatricality accepts the incomplete condition of the dramatic character, his partial and enigmatic character, revealing only a minimal part of himself. The Beckettian image of the mutilated, blind character, reduced to a face, a mouth, a voice... has to do with this reductionism, with this minorisation of the concept of the character. A concept, by the way, that, by identifying with the notion of person, is highly ideologized in our Judeo-Christian-Romano-Western tradition. All the questioning of the self, of the subject, undertaken by contemporary thought, is reflected in the treatment of the character as a residue, as something incomplete and unfinished that minor theatricality advocates.*" Toward a Minor Theatricality. Sanchís Sinisterra (2007).

Image Captions

Fig. 1. Raffaello Sanzio “The School of Athens” (1509-1510). Stanza della Signatura. Vatican. Wikipedia Commons.
Fig. 2. Flammarion engraving. Book by Camille Flammarion, L'Atmosphere: Météorologie Populaire (Paris, 1888) pp.163
Fig. 3. The Drawings of Franz Kafka (1907-1917). Personal Papers. Unpublished.
Fig. 4. Toward a Minor Literature. Book by Deleuze&Guattari. Excerpt pp. 14.
Fig. 5. Obrador Internacional de Dramaturgia, Teatro Sala Beckett, by the architects Eva Prats and Ricardo Flores. Interior.

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Landscape as artifact
Mapping the Upper Iguaçu River Basin

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Abstract

The interface between landscape and infrastructural interventions, as a dual opposition broadly explored in contemporary theory, relates to the territorial scale's potential to mediate natural systems and metropolitan artifacts. In certain suburban sites, however, the recurring act of transforming the land through infrastructural processes results in ambiguous territories in which the emerging landscape is itself an artifact. The decayed sites along the metropolitan portion of the Upper Iguaçu River, in southern Brazil, are an example of this process, where consecutive large-scale interventions of both hydraulic infrastructure and natural resource extraction throughout the twentieth century have slowly consumed the river's floodplains into a *terrain-vague*. The dual character of this landscape relates to the ambiguity between natural processes incorporated by the territory and the anthropic interventions still in course. Starting from the urban scale, mapping the relationship between those geographic conditions and their transformations uncovers the basic elements of the resulting landscape fabric on the architectural scale. This process results in an understanding of the logic that composes this dual landscape, exposing the conflicts between the expansion of the metropolis, a common-pool resource, and infrastructural appropriation, enabling further attempts to address its issues. Comparing natural and artificial as processes that construct and degrade a site – beyond as simply independent layers of space – fosters a dialectical approach to the territorial scale.

Keywords: landscape, infrastructure, *terrain-vague*, Iguaçu River Basin.

1. Introduction

Within architectural practice and discourse, the relationship between architecture, infrastructure, and landscape has long been shifting towards an increasingly subjective interface. In metropolitan contexts, some morphologies of space explicit this approach, such as extraction landscapes, landfills, sites appropriated by large-scale infrastructure, built reservoirs, or channelized rivers. At some level – and not always in a positive sense – all of those examples contain a mixture of these three components or, in dialectic terms, an opposition between natural and artifact.

In the recent history of Brazilian Architecture, a few canonical examples stand out: land reclamations in Rio's Flamengo Park or Brasilia's Paranoá Lake are the result of a heroic position of creating natural settings through large artificial interventions. Adversely, the dismantling of hills in Rio itself and especially the tragic outcomes of mining in Minas' landscape clearly illustrate the obscene character of large interventions as degradation. Beyond those examples from the 20th century, which contain explicit oppositions between nature and artifact, the critical intent of this article is to address morphologies where this dialectic is more ambiguous or hybrid. This approach resounds with contemporary issues such as the emergence of terrain-vague in sites inherited from modernity, or the ambivalent character of natural and artificial in the light of the Anthropocene.

The Upper Iguaçu River Floodplain, in Southern Brazil, stands out as a synthesis of this typological condition due to the cumulation of a few aspects: the relationship between mineral extraction and landscape morphology, the widespread appropriation of space by infrastructure along the river, the vague and ambiguous outcomes of those processes in the resulting spatial fabric. By analyzing this particular landscape, the mapping process offers a glimpse into similar contemporary settings.

2. The territory

The Upper Iguaçu watershed is the inherent territorial condition to the metropolis of Curitiba, Brazil. As a natural system, its basin contains the entire metropolitan sprawl, influencing the hydrological dynamics of at least nine cities (Fig. 1, left). The riverbed, however, is not a central part of the metropolitan dynamic, acting as a boundary between six of those cities, in a mile-wide interval to the urban footprint. Contrary to its potential for preservation and use, this territory has become the site for major infrastructure and resource extraction, as a combination of urban dynamics, regulatory attempts, and hydrological engineering proposals. The fragmented regulatory limits end up missing the notion of the territory as a whole, with instruments that fail to identify the region as a potential public space or ecosystem (Fig. 1, right). Besides, masterplans for the region are usually taken from an engineering perspective or limited to specific fragments of the territory. In a way, the conditions being preserved are not its natural or ecosystemic features, but mostly a drainage infrastructure and the urbanization gap.

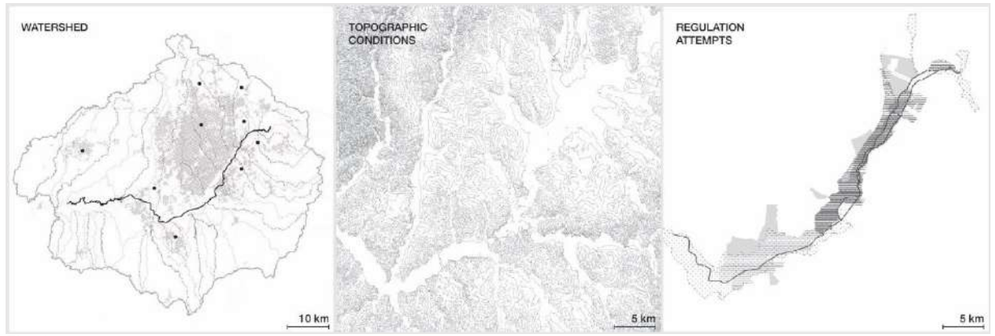


Fig. 1

This way, an analysis of this territory as a comparison of natural and anthropic interventions avoids those preconceptions by shifting the focus to a material, physical, and phenomenological approach. The components, spatial fabric, and units that characterize this landscape setting stem from large-scale systems and interventions. This way, we can establish a sequence of analysis that starts in the territorial scale and unfolds to the architectural or landscape scale.

The notion of *landscape physiognomy*, as proposed by Jean-Marc Besse[1], suggests the interpretation of landscape as an *artifact* to describe the approach of disciplines that intend to work with its transformation. Representing the territory from its processes of construction, physical aspects, material, and scale features is a strategy of analysis that relates to this notion.

3. Natural conditions

On the natural side of the spectrum, floodplains are landscapes naturally understood as subject to some degree of change despite anthropic intervention. In a geological timescale, the formation process of an alluvial plain consists of the accumulation of sediments through a series of consecutive floodings, converting a valley into an increasingly plain substrate, which in turn accommodates a riverbed. The outcome of this process can still be relatively spotted in the resulting landscape by experiencing its topographical conditions and features.

Moreover, the notion of meandering rivers that significantly shift their footprint within the boundaries of the floodplain over a few years is observable in a historical timespan. In satellite pictures a few decades apart, the river course displacements stand out. Also, former channels, river arms, or dried up bayous tend to leave a footprint on the plain's substrate for a long period, visible through soil humidity and vegetation growth, for instance (Fig. 2).

At last, in a human timeframe, floodplains still change significantly over the year, mainly due to floodings themselves, alternating between a visible river course – during periods of drought – to a contiguous water surface that covers the entire plain – on rainy seasons. Besides, vegetation growth alongside the river course and wetland flora that occasionally takes over bodies of water are also subject to significant changes in a short period (Fig. 2).

In any given period, floodplains are associated with a character of mutation, transformation, or a general sense of fluidity, unlike other natural landscapes present in metropolitan regions. In the particular case of the Upper Iguaçu floodplains, the river is at the center of both geological and hydrological processes, most of which are observable in the lesser modified portions of its course (Fig. 2). The fact that it consists of the main river within its watershed, combined with the presence of sediments in high locations within this basin, resulted in the formation of a plain substrate throughout geological periods. In the recent timeframe, the river continues to be at the core of the hydrological dynamics. This condition, however, directly conflicts with urban and infrastructural uses, as described ahead.

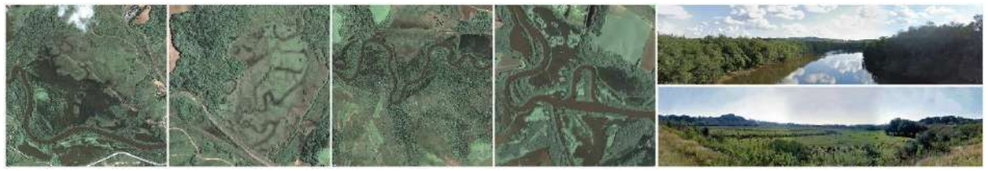


Fig. 2

4. Artificial processes

In this particular setting, anthropic interventions and degradation of the site have been occurring since the mid-1950s, mainly fostered by metropolitan growth and infrastructural needs. While most of these processes go against the shifting character of the natural setting and undo its main characteristics, its results are often disguised and not taken as such. The notion of *infra*structure as a condition of elements that underlie a visible surface is consistent with the fact that those objects are often hidden or omitted from the landscape. Large infrastructures tend to be associated with suburban sites and metropolitan outskirts. However, in the case of the Upper Iguaçu River, the territorial scale of the landscape, combined with its image of a natural system or preservation area, ends up disguising the true dimension of infrastructural appropriation and other forms of anthropic degradation.

Infrastructuralization relates to two independent site conditions – the river as an existing hydrological system and the suburban location of its landscape. As a result, these conditions unfold into two forms of infrastructural appropriation: on the one hand, some infrastructural interventions that take hold of the existing system operate along with those conditions, while other transformations related to its suburban character tend to conflict with the river systems.

The first large scale intervention to take place in the Upper Iguaçu floodplains – channelization of the river course – is an example of the former. In an early stage – presumably due to metropolitan growth and drainage needs – sections of the river were progressively straightened (Fig. 3, first frame). Unlike the explicitly infrastructural channelizations of rivers at the core of the metropolis – such as the processes that took place in São Paulo or Los Angeles with large concrete channels – in this case the intervention was limited to extinguishing the meanders through digging to produce a faster-flowing river.

Following this progressive appropriation by infrastructure, most of the metropolitan portion of the river course is now completely at the service of water treatment facilities. Almost all water and waste treatment plants from the metropolitan region, in addition to clean water adduction lines, are located along the Upper Iguaçu River. The manipulation of its course involved separating channels for clean water and for receiving tributary polluted rivers – comparable to the separation of underground piping systems, for instance –, further consolidating the river's infrastructural character.

Besides hydraulic infrastructure – which directly takes over the hydrological system – railways are the only infrastructure found along the direction of the river course, naturally due to the plain surface surrounding it. All other forms of infrastructural use happen to be located across the floodplain, conflicting with its natural condition and producing, as a result, an increasingly fragmented landscape. Oilducts and transmission lines, for instance, cross the floodplain in multiple points – impacting the landscape with rights-of-way across the plain – and highways connecting cities from both sides are also located only across the river (Fig. 3, fourth frame).

Furthermore, the process of sand mining stands out as the most explicit form of degradation present in this landscape. Since the floodplains are mostly composed of sediments such as sand and clay, it is naturally a site prone to resource exploitation, especially when presented as an open space which no occupation obstacles. On a similar timeframe to the process of river channelization, mining progressively took over the entire span of the alluvial plain, leaving behind open pits which eventually fill up as lakes, consuming most of the substrate up until the early 21st century (Fig. 3, second frame).

The degrading process of gradually dismantling the land stands out, especially when compared to the site's original condition. The natural logic of a floodplain is that of a fixed substrate – which only suffers changes in a geological timescale – while the river constantly shifts, moves, fills, and dries. Anthropic interventions invert this process by fixing the river into a straight channel and, subsequently, the surrounding floodplain is the one to suffer alterations on a much frequent basis.

The outcomes of soil exploitation as the act of dramatically consuming the plain through digging can also be read in the context of an architectural operation. Digging open pits inevitably divides the surface into units of a certain scale, dimension, and morphology, as some sort of urban fabric or *Mat Landscape*[2]. This unintended result consolidates the floodplain as a homogenous horizontal surface, with specific conditions in each area of the floodplain on a local scale.

Landfills are also part of the significant interventions that occupy the floodplain. Two of the main waste deposition sites of the metropolitan region are located along the Iguaçu River, mainly due to its outskirts condition (Fig. 3, third frame). Even though – as a process – constructing landfills suggests an architectural operation opposite to excavating the land, the creation of landfills does not fill the voids left by sand mining, but rather produces an independent deposition of land in the form of new structures. Incidentally, landfills end up composing the majority of built structures rising above the horizontal plain on this territory.



Fig. 3

More recently, attempts to transform these abandoned sites into public use land have not been fully successful. While some parts of the floodplains were converted into urban parks or public equipment, most attempts have failed to connect those spaces to the surrounding territory, addressing only the available fragments squeezed between infrastructures. Also, contemporary appropriations for public use seem to avoid facing the processes by which the site was transformed and ultimately abandoned. Those park interventions are usually taken as independent units within the floodplain, isolated from the city and the landscape, often limited to connecting the abandoned pits into large lakes, which ends up reducing the area available for access and walking by inserting public uses along the narrow remaining portions of land, without taking advantage of the full potential for water use. Besides, the parks created tend to expand a homogeneous idea of public space to those abandoned sites, whose indeterminate potential suggests a larger range of possibilities than the mere replication of models.

5. Results

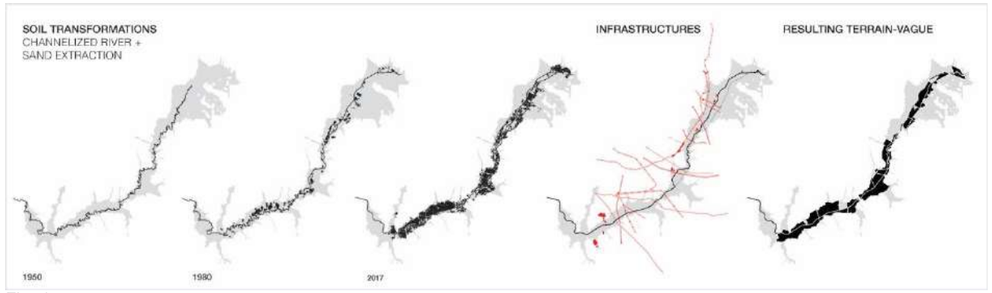


Fig. 4

Half a century of conflicts between the floodplain and the four processes described earlier – river infrastructuralization, sand mining, landfilling, and road fragmentation – contribute to the *ambiguous*, *hybrid* or *ambivalent* character of the resulting landscape (Fig. 4). While all of those processes are artificial interventions, their results are not always perceived as such, when trying to isolate the natural from the artificial components of the territory.

While on the natural side, floodplains are originally subject to change, its anthropic transformations are disguised by both their method and their timing. The extraction of sand by digging into the alluvial plain exposes the groundwater, creating artificial lakes which could easily be taken as natural – the patterns along which these excavations are made also do not follow an explicitly artificial logic, but are a consequence, at some level, of space available along the river margins, the morphology of land parcels and regulatory and operational mining limitations. At the same time, the channelization of the river course merely by digging through its meanders – which often remain as unconnected lakes or bayous – cannot be said to have completely wiped out the original river. Also, the fact that all those transformations happened slowly over half a century, not in the core of the metropolis but the city's outskirts, contributes to this ambivalent interpretation of the resulting landscape.

The incompatibility between a hybrid landscape and the urban fabric has to do with its character as a *terrain vague*, according to the definition suggested by Ignasí de Solá-Morales[4]: abandoned sites whose potential relies on its expectant character. This standpoint suggests that approaching landscapes such as this one might require an interpretation of the territory that deals with its dialectical condition. From one side, the notion of *regenerating*, or *recovering* the landscape does not acknowledge the entropic[5] nature of a much-transformed territory – it is not viable to imagine a return to a previous condition of the site nor the possibility of reversing its degradation. However, a stance that merely justifies or accepts degradation as an urban process would be a cynical approach. This way, dealing with territories that are complex, ambiguous, or contradictory, such as this one, involves a certain balance between acknowledging its degraded condition while simultaneously identifying its expectant potential.

The case of the Upper Iguaçu Floodplains is relevant to a broader discussion in that it represents a category of landscapes that tend to emerge in contemporary metropolitan regions. In the same way that, according to Bruno Latour, the aftermath of modernity produced – in an abstract sense – the proliferation of increasingly hybrid networks[3], the same has been observed in a physical sense when it comes to metropolitan landscapes of territorial scale. Approaches to the terms landscape, infrastructure and architecture – such as the compound *archi+infra+scape+tecture+structure+land*[6] – relate to this context. Mapping the landscape from its processes and physiognomy through an approach of *landscape as artifact*, in turn, is a first step towards addressing an increasingly hybrid architectural practice.

Notes
1 Besse, *Ver a Terra*.
2 Stan Allen describes the idea of a *Mat Urbanism*, as a reading of Alison Smithson's *Mat Building*. Allen, *Points + lines*.
3 Latour, *Jamais Fomos Modernos*.
4 Solá-Morales, *Terrain-vague*.
5 Robert Smithson makes a similar argument concerning entropy in the context of mining landscapes. Smithson, *Entropy made visible*.
6 Angélil and Klingmann, *Hybrid Morphologies*.

Image Captions
Fig. 1. Left. Upper Iguaçu Watershed. Middle. Topography of the region of Curitiba. Right. Zoning limits along the floodplain.
Fig. 2. Regions of the Upper Iguaçu River without anthropic interference.
Fig. 3. Anthropic interventions on the Upper Iguaçu Floodplains and their result.
Fig. 4. Left. Evolution of the Iguaçu river course and substrate (1950-2000). Middle. Infrastructural lines, surfaces and objects. Right. Abandoned sites or vague territories.

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Biography
Gabriel Hildebrand Tomich (1994) holds a bachelor's degree in Architecture and Urbanism from the Federal University of Paraná – UFPR (2019). Collaborated with practices Aleph Zero and Estúdio 41 and earned awards in design competitions as a practicing architect. Develops research on the Iguaçu River Basin since 2019. He is currently pursuing a Master's degree in Architectural Theory, History and Critique, from the Federal University of Rio Grande do Sul (UFRGS).

Åzone Futures Market
Insert Cåin to Start Playing

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Abstract

The agreement reached between the City of Helsinki and the Guggenheim Foundation to explore the feasibility of building a new museum triggered two events between June 2014 and December 2015: the official competition (the Guggenheim Helsinki Competition) and the first online exhibition (Åzone Futures Market). Thus, the dilemma arises whether, in the middle of the digital era, architecture is to be located in the city or to remain in the network.

The contemporaneity of these two case studies requires a methodology based on the analysis of press releases, articles published by the protagonists, testimonies, interviews, photographs, digital portals enabled to advertise the competition, and information extracted from the coverage of the events on social networks. All the documentation gathered has been compiled in a chronology used to structure the architectural discourse.

The two museum models promoted by the Guggenheim Foundation are, in reality, two ways of understanding architecture in which the virtual is opposed to the physical. The architecture affected by digital technology is intangible, ephemeral, and instantaneous. It can be influenced by the volatility that characterizes the contemporary society of which it is a part while confronting its nature with the classic qualities of the discipline, such as massiveness, stability, and permanence.

Therefore, the discourse that spans the Guggenheim Helsinki and Åzone Futures Market should be understood as the moment in history when architecture is torn between the uncertainty implied by the continuity of practices exercised for decades but now within the contemporary paradigms, and the insecurity of entering scenarios not yet explored but under the intuition of their conformity with the era.

Keywords: architecture, Åzone, digital, Guggenheim, museum.

As if announcing the official results of an election, on September 17, 2014, the Guggenheim Foundation made public the participation data for the competition that had begun three months earlier for the construction of its new museum, this time in the Finnish capital. Seven days after the deadline for submitting proposals, the results were ready for release. A total of 1,715 projects from 77 different countries, with their 1,715 texts of 500 words, their 3,430 representative images, and their 6,860 panels in A1 format, were waiting at the former headquarters of the City Art Museum of Helsinki to be evaluated by a committee of experts. Given the magnitude of the figures, statistics seemed to be the most appropriate discipline for approaching the complexity of this architectural exercise.

The news captured the headlines of both the specialist and general press, at the national and international levels. This was nothing less than the architecture competition with the most successful participation ever held in Helsinki; it far surpassed the 544 proposals in response to the call for the building of the city's new Central Library, won by an office with local headquarters, ALA Architects. However, the surprise with which the media received the news was not echoed within the organization of The Next Helsinki, the alternative competition to the one proposed by Guggenheim. Juhani Pallasmaa, a Finnish architect and member of the jury, understood the enormous participation as a logical consequence of the North American institution's decision to publicize the competition for its new museum through an open call, the first in its history.[1]

Ahead lay three months of intense work. According to the calendar established for the Guggenheim Helsinki Design Competition, the second phase, featuring the proposals of six finalists, would begin in early December. The selection process was ambitious and complex. From this context of overwhelming amounts of information to be processed emerges the figure of Troy Conrad Therrien, Curator of Architecture, and Digital Initiatives at the Solomon R. Guggenheim Museum. Conrad had joined the Foundation only a few months previously, and his long-term mission would be to develop the exhibition program for the future Helsinki museum. However, this task had to wait. For now, he was immersed in the 1,715 proposals that had been submitted.

For Conrad, this was a unique opportunity to process with digital tools the enormous amount of information contributed to the competition: an architecture archive with 1,715 different ideas applied to the same city and from the perspective of a common program. This presented an opportunity that Conrad himself would come to define as "the most architectural intelligence in our history at precisely the moment we're able to handle things like big data"[2], an approach that, for Conrad, implied reformulating the nature of the discipline itself. Just as digital technology allows the generation of new mechanisms of interrelation both among humans and between humans and their immediate surroundings, so too architecture should assume this process as its own, even if this implies expanding or diluting the rigidity of its traditional limits as an artistic discipline.

On October 22, 2014, just one month after the publication of the participation data for the competition, the Guggenheim Foundation offered the opportunity to consult through its website (http://designguggenheimhelsinki.org/) two representative images and a short text of 150 words for each of the 1,715 project proposals. This online gallery was overwhelming. A grid of 20 columns and 85 rows of images made up a huge, seemingly never-ending mosaic. And it is there, in that feeling of infinity, that Troy Conrad placed the starting point for his theoretical reasoning. Only by using computer tools could the enormous amount of information available be decoded. This was a contemporary architectural archive that, to justify its existence, had to make use of digital technology.

In his article “Square Roots,” the writer David Huber recounts his experience of several hours spent surfing through the images in the gallery.[3] After realizing, with some disappointment, that he had not been able to cover even a third of them, he calculated that to view the 1,715 proposals for at least 30 seconds each, it would have been necessary to invest a total of 14 hours. However, the competition website incorporated certain mechanisms to prevent its users from finding it tedious to consult the images of the projects. If the ultimate goal of the website was to publicize the new Guggenheim for Helsinki, mainly among its citizens, access to the information had to be attractive. Thus, concepts such as *a shiny*, *smooth*, *transparent*, *flat*, *metal*, *pyramid*, and *asymmetrical* were among a set of 23 labels that could be applied to facilitate the viewer’s search process. The search results from any combination of labels could be shared on social media. The web had become a game capable of encouraging participation and interaction among its users. Now the marketing strategy was starting to work.

According to Huber, the widespread use of both social networks and smartphones during the last decade has generated societies that are visually saturated, leading inevitably to a questioning of the connection between the image and the architectural object represented. If, a few years ago, the image of a building served to establish a more precise link with the place where it was to be located, now that relationship was non-existent. The virtual magma in which online images tend to float meant the loss of their ability to mediate with the world that they should challenge; the images were shown as “media objects whose performance is evaluated within their virtual environment.”[4] Thus, the homogeneity with

which the gallery on the Guggenheim Helsinki website presented the 1,715 proposals was aimed at reinforcing the links between the images, to the detriment of the architectural object represented.

The supply of information that the website provided about the competition did not stop there. On January 14, 2015, the Guggenheim Foundation made public the four A1 panels on which each entry explained its proposal for the museum project. Again, Troy Conrad defended the existence of an accessible database bringing together all the architectural knowledge generated around the new Guggenheim. He did this through his article "Open Architecture! Five Points on Why We Are Opening the Guggenheim Helsinki Competition Data"[5], in which he referred to the need to understand contemporary digital space as a reality not alien to the architectural discipline: a new conception of space, defined as instantaneous, light, ephemeral, intangible and volatile, close to the notion of software; a virtual space, capable of confronting its nature with the classical qualities of architecture, such as massiveness, materiality, stability, and permanence.

Three months later, on the occasion of the opening of the "Guggenheim Helsinki Now" exhibition at Kunsthalle Helsinki, the Guggenheim Foundation made public the results of the second phase of the competition, which included six previously selected proposals. A set of models, plans, images, texts, and panels awaited the approval of visitors in the exhibition hall, while the jury deliberated on the winning project. For his part, Troy Conrad took the opportunity to reflect on the role of architecture in a context increasingly influenced by digital technology. In his article "Guggenheim, Helsinki, Now: Architecture in the Age of the Ideas Industry,"[6] he exposed the risk involved today in the construction of a building, given its qualities of heaviness and permanence, qualities that contrast sharply with the fluidity and dynamism inherent in the society in which the building is to be set. In an environment dominated by the flexibility of digital space, the software makes its way, whereas the hardware that supports it seems to have become obsolete. These reflections implied a failure to understand the concept of the museum as an art container icon, an idea that, nevertheless, the Guggenheim Foundation had displayed in the past.

Faced with this seemingly irreconcilable position between the physical and the digital, Conrad advocated the vindication of ideas as the new icon of architecture. With this, he tried to justify the anonymity given to those who had entered the competition for the new Guggenheim in Helsinki. The intention was to give autonomy to the project ideas presented concerning their authorship. In any digital society defined by the speed of diffusion of information, the concept of the author diminishes in importance. While it is true that, with this argument, Conrad demonstrated an ability to identify the dynamic and fluid character inherent in today's society, his attempt to justify the future presence of the new museum for Helsinki seemed less convincing. It was enough to review the proposals submitted to the competition to ascertain the distance between them and their theoretical reasoning.

Michael Sorkin conveyed precisely that point. The president of the jury of The Next Helsinki criticized as hypocritical Conrad’s attitude to promoting the construction of a physical building from theoretical positions linked to digital. For Sorkin, it would have been much more coherent to seek alternative and innovative formulas with which to disseminate artistic information.[7] At the same time, he was extremely critical of the methods used by the North American institution to colonize other territories, going so far as to identify the Guggenheim expansion model with that used by Starbucks coffee franchises. He used this analogy to highlight the search for economic performance that the New York Foundation carried out through the management of its works of art. Thus, ultimately, the Guggenheim colonies had the goal of financing their Manhattan flagship.

The "Guggenheim Helsinki Now" exhibition directed by Troy Conrad and Ashley Mendelsohn did not contain only the six competition finalists. It also included an interactive installation that made it possible to interpret the information provided by all 1,715 proposals. In this way, the contemporary archive of museum architecture so often claimed by Conrad became a reality. Two complementary methods of analysis had been used for the installation. The first, prepared by the American data scientist Hugo Liu, focused on the texts sent by each participant. Through certain keywords, each proposal was linked according to its emotional, social, spatial, or temporal purpose. The second method, developed by the Finnish architect Martti Kalliala with a team of 60 collaborators, sought to identify the 1,715 projects based on the typology of each building. Also, the Matchmaker Game mobile application was launched, which allowed each player to be linked to one of the six finalist proposals by simply answering the questions posed by the game, a ludic experience sponsored by Guggenheim in the service of the citizens of Helsinki.

As part of the activities complementary to the exhibition, Troy Conrad convened a small group of artists, architects, technologists, urban planners, graphic designers, and filmmakers to promote days of debate and reflection on the future of architecture in a world increasingly shaped by new technologies. The objective was to analyze the decentralization processes inherent in digital media, as well as to study the links that operate between the physical world and its virtual environment. For this, a series of topics were identified that would focus the discussion: Bitcoin 2.0, platforms such as

Ethereum, the Internet of Things, mesh networks, ubiquitous space, peer-to-peer and autonomous housing in international waters (seasteading). Moreover, the symposium was scheduled to lay the foundations for the next Oslo Architecture Triennale, to be held in 2016 under the title "After Belonging: A Triennale In-Residence, On Residence, and the Ways We Stay In-Transit."

The meeting took place in Åland, a province of Finland located off the Baltic coast. This archipelago of more than 6,500 islands was granted autonomy in 1920 by the Finnish Parliament, an agreement that the League of Nations would ratify a year later. A century of self-government has made Åland a legally neutral and demilitarized territory where Swedish is the official language. Besides, Åland has a specific radio call code, its internet domain (.ax), high-speed connections, partial tax exemptions, and the right to private property at birth. It was, therefore, the ideal example of autonomous and versatile territory, which Conrad did not hesitate to take as a source of inspiration for his research. If the digital space inevitably brought about processes of decentralization, the Åland Islands seemed the right place to study them.

Conrad understood the celebration of this symposium as the last link in the chain of international congresses with which the twentieth century had been confined. In 1926, Le Corbusier was selected from among 377 participants to construct the headquarters in Genoa of the League of Nations, an institution that five years earlier had ratified the autonomy agreement between the Åland Islands and the Government of Finland. However, Le Corbusier’s project would never materialize, as the jury considered it to be stylistically inappropriate. For this reason, in 1928 Le Corbusier inaugurated the Congrès Internationaux d’Architecture Moderne (CIAM), with which he intended to generate the discourse to publicize the values of the new architecture.

In 1932, another frustrated project of Le Corbusier, this time for the construction of the Palace of Soviets in Moscow, led to a change of venue for the fourth meeting, CIAM IV; the Soviet capital was replaced by the *Patris II*, a ship serving the route between the cities of Marseille and Athens. The meeting was used to establish the foundations of urbanism promoted by modernism, principles that were included in the Athens Charter. Thus, the route through the Mediterranean of 1933 was to serve as a reference for the celebration of the symposium in the Åland Islands in the spring of 2015, this time through the Baltic Sea.

Three decades after that first maritime experience, the Greek architect Konstantinos Doxiadis, together with the British urban planner Jaqueline Tyrwhitt, set out to continue the journey started by Le Corbusier, this time across the Aegean from Athens to the Greek island of Delos. During the summer of 1963, Doxiadis invited personalities as diverse as the Canadian philosopher Marshall McLuhan, the American architect Buckminster Fuller, the British economist Barbara Ward and the American anthropologist Margaret Mead to participate. The objective was to generate a network of thought capable of responding to the development of cities in a context increasingly influenced by electronics. Just one year later, McLuhan would publish his book *Understanding Media*, in which he predicted that the modification of the nature of space through electronic media would give rise to a system of interconnection of the entire planet, which he called the *global village*. In this way, McLuhan would anticipate by several decades the influence of digital technology in the creation of new bonds between humans.

As a result of those days of retreat in the Åland Islands, on October 23, 2015, the Guggenheim Foundation launched its first online exhibition, Åzone Futures Market. This was a calculated gamble to explore the intersection points between architecture and new technologies. As was the case with "Guggenheim Helsinki Now," Troy Conrad and Ashley Mendelsohn acted as curators. Hugo Liu was involved in the development of the virtual exhibition software. Åzone Futures Market had managed to free itself from the materiality of the walls that used to delimit museums so that it could dissolve into the infinite fluidity of the digital world. Continent and content were dissociated. The exhibition space was no longer part of the building that had traditionally provided it with its existence.

Thus, Åzone Futures Market emerged as a virtual platform that, employing simulation of the stock market, allowed exploration of the capacity of new digital tools to shape today's society. On registration, each user received 10,000 cåin (Å) to invest in technological innovations (futures). For each investment made, the user was obliged to share relevant information that justified the investment (hot tips). In this way, the most valued news allowed the corresponding technological innovation to be listed on the rise, causing prices to fluctuate in the market. Unlike the financial world, which prioritizes currency exchange, Åzone Futures Market traded information. Periodically, the platform updated the list of its most influential investors with the highest trading activity or profits. Based on that list, Conrad and Mendelsohn made a selection of users to interview in *Åzone Review*. In turn, artists, architects, graphic designers, writers, or theorists were expected to intervene in the market periodically to prevent its stabilization.

Therefore, the origin of the virtual exhibition promoted by the Guggenheim Foundation had to be located at the confluence of two objectives: to help visualize the influence of new technologies in people's lives and to facilitate the understanding of the rules that operate in the world of stock market activity. The first objective was set as a result of the retreat days in the Åland Islands, and the second as a result of the meeting between Troy Conrad, Ashley Mendelsohn, and Alexander Bigman that same summer of 2015. This was the summer in which the threat of the so-called Grexit and the instability of the Chinese stock market set the political agenda. In this context, the three members of the Guggenheim Foundation reflected on the measures adopted by different countries to face the financial crisis that had begun in 2007. Conrad says that this conversation helped them understand how the United States had decided to print money, that is, to devalue the currency. The Federal Reserve created about four trillion dollars, increasing the amount of existing money fivefold. In this way, the US Government had opted to alter the stock market. This idea was transferred to the Åzone Futures Market exhibition format. Visitors would now be investors.[8]

During the weeks leading up to the opening of the virtual exhibition, Conrad and Mendelsohn dedicated themselves to gathering information about technological advances in areas as diverse as intelligence, work, government, and health. The final list of 36 futures that formed part of the online platform can be divided into two groups: those that already existed but had not yet been fully implemented, and those that were breaking into the market as a novelty.[9] As an example of the first, Conrad included the concept of universal basic income. The increasing robotization of jobs suggested that promoting an income of this type would become essential as a means to ensure the redistribution of wealth. Within the second group of emerging technologies, Conrad highlighted automatic vehicles. The rapid development of artificial intelligence could in a few years allow the manufacture of autonomous cars capable of avoiding traffic accidents.

In those same weeks, the name of the exhibition was also decided. Conrad explained that the word *Åzone* alluded to the Greek term *azones*, used to designate the gods that did not belong to a specific country. It also took its initial letter (*Å*) from the word *Åland*, in homage to the symposium held there that served as the starting point for developing the digital platform. Conrad added that in Swedish, the official language of the Åland Islands, the same letter was phonetically equivalent to the letter *O*, so that the pronunciation of the word was similar to *ozone*, with the environmental implications that this entailed.[10] Thus, the title of the exhibition brought together a whole declaration of intent that Conrad would use as a marketing strategy.

But Åzone Futures Market was not just virtual, at least during the first weeks of its existence. The Guggenheim Foundation, together with the Center for Architecture of New York, promoted the presence of a physical installation, Åzone Terminal, capable of allowing the interactive visualization of the market for new technologies monitored there. The pavilion's location in the Seaport Culture District, one of the busiest places in Lower Manhattan, could be understood in terms of advertising but also metaphorically. A mere 500 meters from Åzone Terminal, concentrated on Wall Street, was the New York Stock Exchange, the largest stock market in the world, a good illustration of the aspirations of the new pavilion.

The walls of Åzone Terminal were full of screens and computing devices that, like the Bloomberg Terminal, provided real-time information on the emerging technology stock market.[11] For its part, Studio Folder, the Milanese firm led by Marco Ferrari, developed the design of the ephemeral installation, taking as a reference the IBM pavilion that Charles and Ray Eames proposed for the 1964 New York World's Fair. A complex system of screens covered the walls of the pavilion's Oval Theater to showcase the potential of the electronic technology of the time. It is no coincidence that Marshall McLuhan published *Understanding Media* that same year.

Åzone Futures Market was not the only example of a museum institution making use of digital technology. The Cooper Hewitt, Smithsonian Design Museum allowed visitors to interact through touch screens to consult exhibitions and even to suggest their designs. Both the New York Public Library and the Metropolitan Museum of Art made their collections available online, and the Google Cultural Institute digitized more than six million documents belonging to museums in different countries. All of these organizations had understood the importance of incorporating new technologies into the exhibition process, and they did so to expand what was already being shown in their respective museums. However, Åzone Futures Market reversed that scheme. The purpose of the physical installation was to retransmit what happened on the digital platform.[12] The Åzone Terminal was subordinate, its entire raison d'être being the dissemination of the content of the virtual exhibition.

According to Conrad, this was not a matter of transferring museum documentation to the digital space, but of maintaining current art galleries as places for reflection outside the dizzying pace of contemporary society. The virtual world would be the one destined for experimentation.[13] Therefore, faced with the attitude of other museum institutions to the introduction of digital tools in their exhibition halls, Conrad advocated interpreting the implications that these had on people's lives. In his own words, "it's about technology, and it's not about exhibiting technology as much as it is about exhibiting the effects of technology."[14]

In her article "Åzone Futures Market Inflates Expectations, Falls Short," Anna Khachiyan reflected on the exhibition format defined by the digital platform. With this, architecture moved from the physical environment in which it had traditionally been located toward more contemporary positions characterized by the absence of matter. If this new paradigm implied understanding the architectural discipline as an infrastructure of the digital medium destined to support the effects of a representation, then the figure of the architect could be considered as having moved from that of object designer to that of process manager (curator). Thus, Khachiyan identified the symptoms that evidenced the crisis the profession was going through. Her analysis did not end there. For her, "Åzone reflects the psychology of neoliberalism," according to which one discipline was forced to adopt the forms of another to reach an immaterial configuration capable of masking its true nature.[15]

Finally, by way of provocation, Khachiyan contended that museums had stopped competing with each other so that they could compete with entertainment industries such as Netflix or Candy Crush Saga. The recent incorporation of digital tools to disseminate their collections implied an understanding of the museum institution as another entertainment product. In the specific case of Åzone Futures Market, this relationship was evident, since the interaction proposed to the user was similar to that of an online game, in stock market terms, of course, but a game nonetheless.

Throughout the 1990s, years before the massive spread of the Internet, the different sectors that made up the entertainment industry used different broadcast channels. Thus, while the American franchise Blockbuster supplied viewers with movies on VHS tapes, Netflix used the DVD format to meet the demands of its monthly subscribers; the video games industry made use of CD-ROMs inserted into games consoles, and art institutions were inseparable from the buildings that contained them. Each of these sectors used a different device for its dissemination, and therefore only those industries that were competing for the same support, with the same rules of the game, entered into direct competition.

This situation began to change in 2005 with the appearance of the first digital platforms. Companies that failed to adapt their business model ended up disappearing. This is what happened to Blockbuster when, in 2010, it declared bankruptcy. In 2007, Netflix allowed access to its audiovisual content via streaming; YouTube had emerged two years earlier. In 2012, the Candy Crush Saga application for smartphones appeared and, three years later, the Guggenheim Foundation launched its first online exhibition under the title Åzone Futures Market. Now, the conditions had changed. The speed of diffusion allowed by digital media homogenized the channels used, all of them requiring an Internet connection. Since Netflix, Candy Crush Saga, and Åzone Futures Market shared the same broadcast channel, it is in no way strange to think that competition could occur between them, as Anna Khachiyan had argued.

On the same day that Åzone Futures Market made its appearance, Berlin-based American-born artist Daniel Keller set up an army of bots and fictitious user profiles to alter the market for his benefit. The strategy paid off. Just 48 hours later, Keller led the ranking of the most influential users of Åzone Futures Market, having increased his initial amount of virtual money (10,000 cåin) by a factor of 60 and made close to 1,000 stock movements. Keller used the bots, repetitive tasks programmed through the network, and the 174 different user profiles to invest in the same technological innovations (futures) in which he had previously invested, causing their inflation. When speculation had driven the price high enough, Keller sold his shares at a significant profit.

Keller's success led him to be interviewed in *Åzone Review* on October 26, 2015, just three days after the virtual exhibition opened. However, the Åzone Futures Market organization would soon take steps to combat bots. It made an API (Application Programming Interface) key available to users, thus limiting automated actions of the types that had caused market inflation. A week after the exhibition was launched, Hugo Liu, the data scientist responsible for the algorithm for the trading activity of the digital platform, took stock via Twitter: 1,100 humans and 800 bots had traded stock worth 26 million cåin.

Although no date had been set for the end of Åzone Futures Market, on December 13, 2015, its official Twitter account (@AzoneMarket) announced the collapse of its servers and its inability to continue running the platform. Thus ended a pioneering experience in the world of architecture, one which had begun to take shape on the day that Troy Conrad understood the 1,715 proposals presented to the Guggenheim Helsinki as the largest contemporary archive of museum architecture. That file had just incorporated one more proposal.

Notes

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10 Conrad, interview by Caitlin Dover.
11 Ibid.
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Culture and Landscape in Burle Marx's gardens[i]

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Abstract

Modern Architecture amplified the discussion about the synthesis of the arts, firstly considered as the integration of painting, sculpture, and architecture. Even though it’s a late manifestation in Brazil, modernism highlighted not only a new aesthetics but also, this dialogue between arts and architecture. For Burle Marx, the garden is a type of art, he considered it the transition between the architecture and landscape. He designed gardens with tropical flora, typically Brazilian, and introduced different shapes and forms, textures, and colors to its creations providing dialogues with canonical buildings of Brazilian Modernism designed by famous architects such as Oscar Niemeyer, Lúcio Costa, and Affonso Reidy.
Therefore, through a comparative analysis methodology, this paper aims to analyze and compare two of Burle Marx's designs that compose iconic projects. Even though they were built based on the human scale they occupy different locus: the gardens of *Ministério da Educação e Saúde* (MES, 1936), a building considered the synthesis of the arts of Brazilian modernism and the gardens of Museu de Arte Moderna (MAM, 1954), part of *Parque do Flamengo* (1954-1964), one of his most well-known projects, which has more than a million square meters. It is presented in this paper with the purpose of discussing the synthesis of the arts on an urban scale.
Both gardens can be compared by their differences, they present different language and concepts. Whereas the first one established a dialogue with its built environment and the inaugural elements of the Brazilian modern visuality, the second is composed of different forms and textures, within the natural landscape. Burle Marx presented a work shaped by four elements that together distinguish Brazilian modern architecture: aesthetics, technique, tropicality, and ethics, once that he believed that the garden should perform a social role in the life of those who visited it.

Keywords: Burle Marx, Modern Architecture in Brazil, Aterro do Flamengo, Ministério da Educação e Saúde.

1. Introduction

Internationally recognized for his aesthetics and use of tropical species, Roberto Burle Marx was an exponent of Brazilian Modernism. Gardens designed by him were not only seen as a work of art, but also promoted an intense dialogue between architecture and landscape, and between outer space and iconic architectures made by renowned Brazilian architects, such as Lúcio Costa, Oscar Niemeyer, and Reidy.

The landscape design by Roberto Burle Marx is commonly discussed through an approach to his artworks, such as paintings and tapestry. For the landscape designer, a garden is a Form of Art. However, due to its complexity, the understanding of this type of work could only be done through the understanding of other arts. In order to recognize the Garden as Art, it is necessary to acknowledge how it approaches or distances itself from its subject, and its cultural relationship with the environment and the landscape.

To further discuss this matter, it is important to note that Burle Marx's work presents us with four elements that helped distinguish Brazilian Modernism: Aesthetics, technique, tropicality, and ethics. In addition to being considered the transition between architecture and landscape, which he also defines as "an aesthetic requirement, which is neither luxury nor waste, but an absolute necessity for human life and without which civilization itself would lose its reason to be". For him, respecting the legacy of his profession was much more important than the originality of the project.[ii]

Through the use of intermediate scales, he drew transitions between built environment and landscape, and he was always aware of the social behaviors and functions that his projects would play. Although he considered that the garden was the ordering of nature by the hands of men, it is essential to understand its role.

Therefore, the purpose of this paper is through a comparative analysis methodology juxtapose two works by Roberto Burle Marx that compose iconic projects in Brazilian Modernism: the Gardens of the Ministério da Educação e Saúde (Ministry of Education and Health, MES, 1938), and the gardens of the Museu de Arte Moderna do Rio de Janeiro, (Museum of Modern Art of Rio de Janeiro MAM, 1954). Even though they were built based on the human scale they occupy different locus. This essay aims to shed some light in the brazilian landscape designer without comparing his work with other peers. It is also a part of a larger study about the construction of a modern language in Brazil. Thus, for the understanding of his work a discussion will be made through six fundamental topics: Aesthetics, Language, Artistic Expression, Social Function, Tropicality, and Education.

2.Burle Marx: The Garden as Art

Burle Marx was not only a painter, an architect, and landscape designer, he had numerous attributes that were revealed throughout his life and work. Although his first contact with tropical flora was in the greenhouses of the Berlin Botanical Garden as a painting student in Germany, it was in Brazil that he found inspiration to accomplish his projects. Traveling through the hinterland or abroad was fundamental for architects at that time, helping them in their professional training, was important for vision enrichment. Burle Marx remained in the Northeast Region of Brazil between 1934 and 1937, in the position of Director of Parks and Gardens in Recife. His insertion in a new network and especially the contact with new species of Brazilian flora helped him to expand his vocabulary.[iii]

In order to preserve the flora, Roberto Burle Marx conducted interdisciplinary expeditions composed of architects, botanists, and geographers with the purpose of studying and searching for unknown species to safeguard. For him, to be in front of a new species was exciting. Burle Marx welcomed numerous landscape designers into his studio during his life, although he only taught for a period in the year 1954 at the Faculdade de Arquitetura do Rio de Janeiro. For him, traveling was important because it was a source of knowledge about new plant species, a way to expand his collection and improve the composition of his gardens. Burle Marx described the discovery of a new species as an unutterable emotion. These discoveries reveal the cultural dimension of nature at that time and the appropriation of the new. This inclusion of nature in the landscape vocabulary or his repertoire shows us how it is submitted to acculturation and allows us to make an approximation between art, culture, and nature as parallel relationships, fundamental for discussing his work.

Burle Marx’s concerns were beyond formal relationships. For him, gardens’ projects ought to be socially concerned and play ethical conduct. He worked with an intermediate scale between human and landscape. Burle Marx understood the garden as a transition between architecture and landscape responsible for creating a balance between the built and the natural environment. Without evoking memories of the past or the past itself, designing a garden was an opportunity to create a new language that designated its social role in the city and in people's lives, promoting encounters and following the growth and evolution of cities.[iv]

It is interesting to understand the confluence of modern ideas in his gardens. In his projects, Burle Marx combined social and ethical values with art and aesthetics while introducing tropical species. For the author Marta Iris Montero, the choice of painting everyday scenes and Brazilian characters, place Burle Marx in the avant-garde position. His search for native elements and the selection of tropical species to compose his gardens, combining them to form “artificial ecological associations” reflected his opposition to academicism.[v]

The chromatic and formal relationships, manifested spatially in his gardens come from his practice as a painter. Montero highlights how abstraction was anticipated in his design practice long before it was reflected on his canvases. Although, for Burle Marx, the garden is in itself a form of art, or in his words: “a way of ordering and composing my paintings using unconventional materials”. However, he points out that “I myself am the first to realize that I do not differentiate between the object 'painting' and the object 'landscape' that I have built. They are only the different forms of expression that change”.[vi]

Burle Marx's observations about the gardens are very important. In a lecture dated from 1962, entitled “The Garden as a Form of Art”, he talks about how the structure is essential for human life. The landscape designer recognizes the gardens as elements that are able to reconstruct nature in an orderly way and is part of civil life, being able to fulfill some human needs.

In the same lecture, according to Burle Marx, the gardens a priori were merely reproductions of their surroundings. It occurred due to the lack of knowledge of their designers, or because they depended on this environment for their survival. For the landscape designer, despite the constantness of the elements present in the garden, there is a complexity in the craftsmanship involved in the design. For its creation not only knowledge of other arts is required but also “the willingness to learn from nature”.[vii]

Although ordered, nature in Burle Marx’s gardens is wild.[viii] For an apprehension of landscape design as art, due to its aesthetics, it is necessary to understand this subject in relation to other arts. Before becoming a landscape architect, Roberto Burle Marx was a musician and, just as music is transformed in time and space, the garden also carries with it dynamic transformations that last longer than in other works of art. As in architecture, for example, in which the essence is the search for stability, the actions of time that cause changes to take place in the context of culture and urban dynamics as well as in painting and sculpture, in which the pigment changes over time even if the object maintains its shape. In these latter arts, considered by Segre(2013) as the major arts, the effort is always made towards preserving their intangible and static character.

A garden’s project is not permanent and presents variations over time because of its fauna and flora.[ix] Thus, as art, it approaches music while moving away from static arts such as painting and architecture. An example of apprehension of this garden dynamics can be seen at Parque do Flamengo (Flamengo’s Park), where palm trees bloomed for the first time, 50 years after being planted. Another example, also found in the park, is in the gardens of the Museum of Modern Art, where the different shades of grass that composed an organic design in the square no longer correspond to the originally planned design. To understand and apprehend these changing dynamics, which occur not only over the years but with the changes of the seasons, offer us tools to recognize this art that is also culturally appropriate and can even be domesticated for contemplation.

3.Language: Form, scale, and landscape

In the garden, the acknowledgment of nature as culture is distinguishable as a result of the admiration of something conspicuous that can be considered beautiful and sublime, especially because of its constant changes and renewals over time, given its composition. “A garden should be, in short, a work of art - like painting, sculpture, tapestry, or a symphony”.[x] Admittedly, not all gardens qualify for this title. In the 19th century, the social role of the garden was excluded from its project, an issue that was reintroduced in Burle Marx's compositions, especially regarding the sensitive apprehension of the observer. “The garden structure, therefore, anticipates the sequential experience that the walker will make, submitted to the different angles and frameworks arranged in their intention ”. [xi]

Thus, through the walker’s experience, a garden combines spatial and temporal dimensions once that by walking in the proposed path, the observer faces ”chosen points of view and the parade of visual sequences captured under angles in constant modification”.[xii] And in this, a garden differs from other works, by combining different dynamic and experimental processes that invite sensoriality. A work of art that is constantly changing and because it embraces cultural concepts it gains different status, as it is uniquely inserted in everyday life. Although for Burle Marx, to understand a garden is required knowledge from other forms of arts, in fact, his garden approaches people through everyday insertion, being able to be experienced in different ways during the journey.

Among the elements “in perpetual modification”, the one he considered as the greatest challenge within composition and design of the landscape is the light since it is variable and cannot be controlled. This is the element that provides different sensations to the viewer, promoting new scenarios and discoveries, nuances, and colors. Natural light, which is impossible to be reproduced, is important for the composition that is meant to provide the sensitive apprehension linked to the sublime that out of context becomes vulgar because its immanent potential is lost. Light is essential to praise the beauty of the species selected for this landscape ordered by man as the composition is important to enhance the arranged elements in the project. This suggests the designer’s concern with giving rhythm and movement to the elements which compose the created landscape and that should not mimic the natural landscape but be in accordance with it, respecting the place where it is inserted.

4.Social Function

Would the presence of a garden in everyday life be one of the obstacles to its classification as a work of art? Despite its presence in daily life and is considered a cultural element, a garden fulfills different functions. Simple and intuitive experimentation takes place with the observer's interaction with some sculptures and architectures. The relationships between space and time exemplify these functions performed by gardens, whether technical or social. The sensitive experience reveals the social function of the Burle Marx Gardens, whether the project is a lovers' garden, a space for sports, or a kid's place, each with its specificity that implies the construction of this space and the composition of the project. The technical function of the garden ends up encompassing the sensory, medicinal, and ornamental aspects, which complement the primary function, called social. For Burle Marx, "the function of the garden should be contained within its beauty - it must no only be suited to its function".[xiii] The landscape designer himself exemplifies this through the Parque Flamengo project, which, despite having several functions, would need to recompose a landscape that no longer existed there. Therefore, in the Burle Marx garden, we find the application of the Vitruvian triad: Firmitas (technical), Utilitas (function), and Venustas (aesthetics), as well as the elements that underpin the architecture. It can then be considered that the garden, like independent or complementary work, fits into the analysis of the synthesis of the arts proposed for this article.

5.Artistic Expression

According to Burle Marx, the garden is a transitional space between architecture and landscape, so it is necessary to understand the scale he worked with. The landscape designer adopted an intermediate scale between human beings and nature. In this way, he could provide the user a reference in that space, so the user could feel integrated into that.

The relationship with the built element, as well as the selection of plant species and coverings for the composition of the project, depended on the demands of the context and the environment to be met. A plant, according to the landscape designer, would only reach its peak of beauty if it was inserted in a context close to its natural environment. The formal and chromatic relationships, together with the selected species, contributed not only to the composition of visuality in landscaping but also to the creation of an atmosphere and the garden's suitability for the social function it should fulfill, that is, to provide a unique sensory experience to the observer.

The plant as a natural material depends on environmental and local conditions. Such as the light that offers resistance to the project because it is not constant and always different. Artistic and visual language, like painting, is combined through shapes, lines, and composition to natural matter, and the way of preparing the soil, drainage, fertilizer, and irrigation. Therefore, it is possible to understand that, although Burle Marx designed the composition of a garden like an artistic work, the solution presented for his landscape design was extremely different because it required contact with the locus.

5.Tropicality and Education

Hence, the insertion of aspects that meet the condition of tropicality in his projects is not only linked to the knowledge of the species, but also to the place where they are included, together with the extensive practice of research, design, and gardening, which put him in a distinctive position amongst professionals of the area. The preference for tropical species is related to the location where his works were situated, most of them being in South America. This symbolic function corresponds, in architecture, in adapting to the climate and culture. So many were the ones who sought him out as a reference. Burle Marx, a dedicated and inventive professional, had his own plant laboratory, experimented and created remarkable works that made critics consider him as the exponent of Brazilian Modernism, and save criticism at the time of the beginning of the decline of modernism in Brazil. Burle Marx's legacy is important for the construction of a landscaping visuality, as well as contributing to debates about unique tropical flora and aesthetics, producing works that permeate modern canons, always mentioned by critics, inaugurating identities and marking works. For this reason, the approach of two iconic gardens, to be analyzed for their differences, shows us the use of their aesthetic and technical values and the plurality of their work.

6.Modern Architecture in Brazil

Modern architecture has broadened the discussion about the synthesis of the arts. Although its late manifestation in Brazil, it stood out not only for containing a language that explored the plasticity of concrete but also for using traditional elements in its composition and incorporating the concept of "total artwork" in buildings and urban projects. The gardens with tropical species, considered typically Brazilian, designed by Roberto Burle Marx are an element of this dialogue between art and architecture. When working with natural elements and man-nature relations, he introduced different forms and built gardens using textures and colors that in dialogue with iconic buildings of Brazilian modernity, made by architects like Oscar Niemeyer, Lúcio Costa, and Affonso Reidy.

The discussion about the Ministry, although for some already outdated, still offers us inputs for new readings. Especially about the Synthesis of the Arts, which will provide us with the bases for comparison and discussion of MAM gardens as the synthesis of the arts in a spatialized way in the urban space and which even offers the possibility of discussing the cultural landscape, since the project for Parque do Flamengo was declared World Heritage in this category.

7.Burle Marx Gardens

Burle Marx's forms, although not understood by some critics, such as Max Bill who said that they were purely decorative, were praised by critics like Zevi who saw beauty in organic design as opposed to the purist rationalism of the beginning of the Modern Movement. Critics at the time, according to Fraser[xiv], pointed out the gardens of the MES as an attempt to search for a typical Brazilian architecture amid Corbusian rationalism. In an interview with the Los Angeles Times, the landscape designer mentioned Le Corbusier's influence on his work, as he had the chance to meet him during his visit in 1936, and later work with him on the MES project.[xv] However, his work stood out for being sui-generis proposing a new way of dealing with nature that, according to Siqueira, his gardens "are committed to the paradigmatic acceptance of the instability and mobility of nature, understood not as a formal model to be followed - 'formula' - but as a vital structure of the city itself, a natural demand for civility". For her, "formalized power works as a way of putting nature and art back into the circulation of life". [xvi]

However, it is necessary to see this project beyond a "typical anthropophagic proposition in Brazilian Modernism" as indicated by Fraser. In MES, the garden stands out not only for its visual and pictorial characteristics but also for marking the institution of a prominent element in Brazilian Modern Architecture, a garden that proposes an aesthetic based on the choice of native species, thus bringing originality and modernity amid the adaptation of an International Style in the country.

For Segre[xvii], "The MES, with its ethereal constructive materiality, configuring an urban, symbolic and metaphorical space, paved the way for new expressive searches of the architectural culture of Rio, which would culminate in Brasília". The MES could then be considered a work of art, or as the author highlights Walter Gropius' idea: a "complex work of art", an architecture in which it is impossible to disassociate the art elements presents in its creation.[xviii] This architectural work was revealed as a body that unites sculpture, painting, architecture, and landscape, later became a special part of modern visuality in Brazil, especially due to the work of Roberto Burle Marx and Portinari.

These dialogues between art and architecture offering new forms and visuality were favored by the experience of some architect painters. According to some critics, at this point in history, it is no longer possible to disassociate these elements. Art, architecture, painting, and sculpture merge into a single element, which even compromised the term "Work of art". For Pedrosa, MES couldn't be considered a synthesis of the arts, however, Burle Marx "was the first to make a notable contribution to the new architecture in the subject of art that is complementary to it, a garden. He gave space to common plants. He used them as a true landscape designer, painter, and architect".[xix]

For Costa, architecture is the product of the present moment and the architect is recognized for its originality when it reaches social, technical, and aesthetic parameters. For him, the synthesis of the arts happens in a moment of fullness when "the work of art takes a precise and unanimous direction: architecture, sculpture, painting form a single cohesive body, a living organism of impossible disintegration."[xx]

The roof garden designed for MES was the project that made Burle Marx recognized worldwide as a landscape designer, and at that moment his distinctive language stood out. The reading of his works was considered difficult by Walter Gropius, but he also considered it work full of beauty. Its design promoted a revolution in the way of organizing gardens and proposing a journey experience for the walker while not imposing a center or fixed order. According to Siqueira, when he "uses organic forms, he is able to impose a different order from one of the growth processes", reaffirming the idea of artistic freedom, without rules, even to the species selected for the project.

For Segre, the aesthetic innovation implemented by Burle Marx "had a long and complex process of maturation, in opposition to a flash of spontaneous creation, as defended by Pietro Maria Bardi".[xxi] Fraser points out that Lúcio Costa invited him to compose the MES team in 1938 in recognition of his multifaceted career, also because he believed in the originality and modernity of his designs.

As already discussed throughout the text, Burle Marx's gardens, as presented here, can be considered as a work of art complementing critically acclaimed projects, canons of Brazilian Modernism. The gardens are intrinsic to these works that can be considered a synthesis of the arts and have the elements considered fundamental for the establishment of a typical Brazilian Modern Architecture. The elements are aesthetics, technique, tropicality, and ethics.

These two gardens were built at different phases of Burle Marx's career, therefore, have their own distinctions arising from experimentation and, as a consequence present the improvements of work in constant construction. Starting with the aesthetic discussion and the language used in these two selected examples, the distinction of the prominent visuality is remarkable. Organic forms are opposed to the "constructive garden" or "concretist", which would classify it as pictorial and sculptural, given the elements inserted in these projects.[xxii] The oppositions are contrasting. First, regarding the scale, MES'

garden is a roof garden whereas the other one is part of a park with more than one million square meters. Location is also contrasting: the first is a garden contained within a building, the second, in a privileged locus amidst the landscape of Guanabara Bay, Rio de Janeiro postcard. In clear opposition to the language used in the MES, at MAM Burle Marx presents a garden that, although it contains sinuous curves in the lawn and in the floor design, is predominantly made of straight lines.

Although the Project for MES is smaller than MAM, it points to the insertion of organic forms contained in this modern space. Burle Marx's design for the Ministry does not intend to replicate the curves of the carioca landscape, nor is it purely opposed to the architecture, but it aims to work on visual perception and experience through a drawing that unites shapes, plans, and colors. Siqueira points out in this project branded elements that sustained the designer's language until the 1950s: the chromatic alternation, the movement of pieces, and the opposition between vertical and horizontal represented by the use of tropical flora.

Regarding the work at MAM, Mário Pedrosa[xxiii] mentioned: "where the pure artistic is surpassed for the benefit of the pure architectural landscape". The museum is considered the starting point of the Parque do Flamengo project in a space that favors the natural landscape, despite being built on a landfill, but which has the most privileged view of Guanabara Bay. The natural components are arranged in a geometric, pure, and complex way in a complex dialogue with Reidy's architecture, whose concern was to develop an architecture that would not disturb the landscape, a non-conflicting element. In Burle Marx's gardens, an artistic expression that is allied to freedom of natural elements differentiate itself from the work of other architects. The Brazilian designer prefers the polished element in a rectilinear form, like the stones used in the designs of the mosaics, which are located on the floor, whereas other designers prefer elements in their natural form at the eye height as a composition of a visuality. In the garden he designed for MAM both types can be seen in contrast to the natural landscape.

Both gardens have different social functions. Although the MES was inserted in a broader project of cultural policy and modernization proposed by the Government at the time, MAM and the Park are in the opposite direction: their existence was against the foresee plans proposed by the government for the area that wanted to build a set of blocks that could take the privilege of the seaview. According to Margareth Pereira, the main goal of Burle Marx, Lota, and Reidy at Flamengo Park was not to create a refuge but an urban landscape inserted in the "cultural movement that the park represents"[xxiv]. Tropicality is intrinsic to both projects. The plants used by Burle Marx, although considered "commoners" by Mário Pedrosa, are appropriate to the place in which they are inserted, and propose a new landscape visualization in addition to the "noble" plants previously used as ornaments. The subtleness of the proposed project for MAM is revealed through the artistic details introduced in the visuality, as can be seen in the wave lawn, for example, which coexists with the floor waves, continuing the drawing. Although in the MAM project the beds are mostly limited by orthogonal lines, the plants find expression through the organic form, while at MES the opposite happens: the ameboid beds are limited by architectural orthogonality including invading the urban environment with its organic forms on the floor. According to SIQUEIRA (2002), Burle Marx presents us with an "ambiguous continuity" at the MES; in this context, the architectural forms merge with the landscape forms, in a dialogue with modern visuality but without denying orthogonality.

Burle Marx's innovative and modern thinking is what made countless professionals posteriorly look out for him as a reference. The work developed by him at Santo Antônio da Bica, the small farm where he lived in and his designs were very important for the development of a typical Brazilian language in Architecture. Also, it reflects Brazilian Modernism because of the establishment of a basis and the introduction of ethical and social factors in his projects. It is important to understand how the adoption of the human scale was fundamental in bringing this ordered nature closer to people as a transition from the natural landscape to the built environment. In addition, it is also important to understand the fascination with the natural elements and the importance of adapting the selection of species to their place of implementation. Burle Marx was, without a doubt, an icon whose legacy is still admired due to his aesthetics and personalism which were considered appropriate to the edifying values of the modern movement.

Notes

1 This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) – Finance Code 001.

2 The original citation in Portuguese is: "uma exigência estética, que não é nem luxo nem desperdício, mas uma necessidade absoluta para a vida humana e sem a qual a própria civilização perderia sua razão de ser". Burle Marx apud Jacques Leenhardt, *Nos jardins de Burle Marx* (São Paulo, 1994),47.

3 Roberto Segre, Ministério da Educação e Saúde: ícone urbano da modernidade brasileira, 1935-1945 (São Paulo: Romano Guerra Editora, 2013)

4 Roberto Burle Marx, Leonardo Finotti, e Gareth Doherty, Roberto Burle Marx Lectures Landscape as Art and Urbanism, 2018

5 Marta Iris Montero and Roberto Burle Marx, *Burle Marx: El Paisaje Lírico* (Barcelona: GG, 2001), 26. Bruand highlights Mina Kablin's pioneering spirit in this field, in the first modern house made by Gregori Warchavchik - her husband - in 1928 in São Paulo, however, Burle Marx gained notoriety and recognition in the matter. 1981: 91

6 Jacques Leenhardt, *Nos jardins de Burle Marx* (São Paulo, 1994),48

7 Burle Marx, Roberto Burle Marx Lectures,105

8 In this context, it refers to a domesticated nature that maintains an original, natural or wild aspect.

9 For Burle Marx (apud LEENHARDT,: 35): "The dimension of time is constitutive of the art of gardens. First, of course, due to the fact that the garden evolves with the growth rate of the vegetables and, therefore, the relationship that is initially established with the vegetable is just an unfinished prefiguration of what it will be when the garden has reached its maturity. In fact, we can hardly speak in a definitive state when it comes to gardens, since the life span of each species is different and it will be necessary to permanently prune, cut and replant. But in fact, the most essential time when it comes to the experience of the garden and the landscape is that of the walker."

10 Burle Marx, Roberto Burle Marx Lectures,105

11 Jacques Leenhardt, *Nos jardins de Burle Marx,* 35.

12 Leenhardt, *Nos jardins,* 35.

13 Burle Marx, Roberto Burle Marx Lectures,118.

14 Valerie Fraser, "Cannibalizing Le Corbusier: The MES Gardens of Roberto Burle Marx," *Journal of the Society of Architectural Historians* 59, no. 2 (June 1, 2000): 180–93, https://doi.org/10.2307/991589.

15 Published on April 23, 1989, the interview is available at: < https://www.latimes.com/archives/la-xpm-1989-04-23-re-1597-story.html > last access on April 2nd, 2020.

16 Vera Beatriz Siqueira e Roberto Burle Marx, *Burle Marx*, Espaços da arte brasileira (São Paulo, SP, Brasil: Cosac & Naify Edições, 2001)

17 Roberto Segre, Ministério da Educação e Saúde, 417.

18 Although this integration between arts and architecture was questioned in the 19th century, due to academic scholars and the copying of pre-existing models, the dialogue was resumed in the middle of the 20th century. According to Gonsales, it can be said that the inaugural moment of the discussion about the integration of the arts occurred with the first proclamation of the Bauhaus in 1919, with the design of a building in which architecture, painting and sculpture would then be unified. There is a transformation in this dialogue between art and architecture, in which "interdisciplinary relations" start to predominate aiming at "the rescue of a formal totality". This theme emerges as a proposition of the avant-garde who, in order to elaborate a new language, proposed to study spatiality through architecture. Célia Helena Castro Gonsales, "Síntese Das Artes Sentidos e Implicações Na Obra Arquitetônica," *Vitruvius*, May 2012, https://www.vitruvius.com.br/revistas/read/arquitextos/12.144/4351. The concept of "Complex work of art" or "Total work of art "(Gesamtkunstwerk), was even presented in the Bauhaus founding manifesto, and presents the id is I was going They are not greater arts since the design of the building, in which architects, artists and sculptors work together, thus creating a work of collective authorship. Le Corbusier was a fan of the theory, being, occasionally, the only author of the different disciplines in the same project, proposing architecture, painting and sculpture. Later, between 1940 and 1950, this discussion was resumed by CIAM, which created the "Nine Points of Monumentality", in which this discussion was articulated to the urban, and came to be recognized as the fifth civic function, along with the other four already provided for in the Athens Charter (Fernanda Fernandes, "Síntese Das Artes e Cultura Urbana. Relações Entre Arte, Arquitetura e Cidade.," in *DOCOMOMO Brasil*, accessed October 5, 2020, https://docomomo.org.br/wp-content/uploads/2016/01/176.pdf).

19 Originally "Il a fallu que vienne un jeune artiste, un peintre, Roberto Burle Marx, pour se dégager de ces préjugés. Il fut le premier à apporter à la nouvelle architecture une remarquable contribution dans le domaine d'un art qui lui este complémentaire, celui du jardin. Il donna droit de cité aux plantes plébéiennes. Il les utiliza en véritable paysagiste, peintre et architecte." Mário Pedrosa, "L'architecture Moderne Au Brésil - Conference de Mario Pedrosa," *L'Architecture d'Aujourd'hui*, Dez 1953, Arquivo IEB-USP, fundo Aracy Abreu Amaral, AAA-MP-055.

20 Lúcio Costa, *Lúcio Costa: sôbre arquitectura*, ed. Alberto Xavier (Porto Alegre: Centro Universitario Ritter Dos Reis : UniRitter, 2007). 42

21 Segre refers to a quote from . Pietro Maria Bardi, The Tropical Gardens of Burle Marx (New Y ork, 1964: 14) "Suddenly (…) Roberto had the idea of introducing new modes that would be better suited to the dramatic nature of the tropical landscape. " recovered by Fraiser in his article: Cannibalizing Le Corbusier: The MES Gardens of Roberto Burle Marx (2000:183)

22 Siqueira e Burle Marx, *Burle Marx*, 2001

23 Lúcio Costa, *Lúcio Costa: sôbre arquitectura*, ed. Alberto Xavier (Porto Alegre: Centro Universitario Ritter Dos Reis : UniRitter, 2007), 17

24 Margareth da Silva Pereira, Jardim de Mémorias, Parque Do Flamengo 50 Anos (Rio de Janeiro: Casa 12, 2015), 36.

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A comfort paradise amidst *green hell*

Discursive plans in two advertisements of a modern hotel in Amazonia

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Abstract

Focusing on the printed media advertising campaign of Hotel Amazonas, built in Manaus in the 1950s, this paper aims to develop a critical reflection on the transmission of environmental subjects in the construction sphere and the usage of modern architecture in the redesigning of the Amazon socio-economic identity after World War II. Specifically, the research examines two advertisements published in a widely read illustrated magazine, dissecting their specific production conditions and their intended and produced effects of meaning.

In order to analyze the verbal and non-verbal dimensions of these multi-semiotic objects, a multidisciplinary approach is followed, combining the theoretical-methodological procedures of discourse analysis (focusing on the concepts of interdiscourse, scenography, and ethos) with comparative methods that confront side by side the architectural representation in these advertisements with that of preceding modern architecture models and the local context.

The results highlight the binomial structure (opposing past to present, wilderness to urbanity, and nature to human construction, supported by a clearly dualist slogan) and the existing divergences among the advertisements discursive plans while evidencing the use, as simulacrum, of the discursive formula *green hell*, designation of the Amazon forest stemming from the literary discourse. Engendering the illusion of architectural immersion in an inhospitable natural universe, these advertisements also recreate the memory and identity of the Amazonian space, next to which the hotel gains attractiveness by contrast.

The possible repercussions of these deep-rooted concepts in the discourse of modernity - namely in the understanding of natural ecosystems as paradise only while walled and urbanized spaces -, are finally discussed along with the specific usage of semantic and semiotic devices - among which architecture modernism -, as tools for erasing from the region history critical remembrances of the rubber extraction eras.

Keywords: discourse analysis, modern architecture, printed media, advertisement, Amazon region.

1. A Modern Hotel in Amazonia

Hotel Amazonas, launched in early 1951, in Manaus, Brazil, was advertised and is often referred to as the first modern hotel in the Amazonian capital (Duarte, 2009). Although few systematized information exists on Manaus mid-20th century modern architecture, this hotel, designed by the architect Paulo Antunes Ribeiro (1905-1973), is probably the most widespread architecture work from its time and region in Brazilian historiography (Segawa, 2019), and an icon of modern hotel architecture in the Amazon and Brazil (Paiva, 2019).
Its architecture project has been internationally published by “L'Architecture D'Aujourd'Hui” magazine, one of the most relevant publicists of Brazilian modern architecture in the 1950s (Mindlin, 2000), and was inaugurated with the presence of the country’s president Getúlio Vargas (1882-1954). Originally named as Ajuricaba Building[1], the project of Hotel Amazonas, whose construction started in 1947 shortly after the end of World War II and the 2nd Amazon Rubber Boom (1942-1945), had the collaboration of the landscape architect Roberto Burle Marx (1909-1994) into the roof and ground floor garden design and exclusive decorative art prints representing Amazonian fauna and flora. The project of Hotel Amazonas followed the precepts of modern architecture, demonstrating a Brazilian reinterpretation of Le Corbusier’s work, a trait in other Paulo Ribeiro projects, being built by the initiative of the insurance and investment Company “Prudência e Capitalização”.

Headquartered in São Paulo, “Prudência e Capitalização” was created in 1930, being one of the few companies authorized by the state, during “Estado Novo”/”Era Vargas” autocracy, to offer capitalization bonds. Before Hotel Amazonas, the company has been responsible for the residential project Prudência Building (1944-1948), in Higienópolis, SP, designed by the architect Rino Levi (1901-1965) with a landscaping project by Burle Marx, which rapidly became an icon of modern architecture[2] in the city, causing great success among São Paulo’s upper class, due to its innovation and comfort features, including heated taps, air conditioning, power generator, bioclimatic design, and internal movable partitions.
At the time of Hotel Amazonas inception, “Prudência e Capitalização” was presided by Adalberto Ferreira do Valle (1909-1963), born in the Amazonian city of Belém and raised in Manaus, a descendant of one of the most prominent rubber tapper families in the 1st Amazon Rubber Boom (1879-1912), and close to Getúlio Vargas. Ferreira do Valle became the founder and director of several companies between the 1930s and 1960s, in Manaus and São Paulo, such as the Brazilian Jute Spinning and Weaving Company, Manaus Oil Refinery, and Amazontur Turismo.

The context of construction and advertisement of Hotel Amazonas, at the beginning of the 50s decade, is marked by a need for economic and identity reformulation of the Amazon region, partially caused by the end of the Amazon Rubber Boom (Vitorino, 2020). Its last peak of economic activity, during World War II, driven and partly financed by the United States of America[3], has also been known as the “Rubber Battle” - with the compulsory enlisting of thousands of Brazilian north-eastern workers displaced under force, of which only a small fraction survived -, eventually dropped with the replacement of natural latex by oil-derived synthetic rubber. This had a consequent focus on the tourism industry boost - supported by governmental tourism policies, backed since the 1940s by a Press and Propaganda Department[4], which identified its potentialities in the construction of the country’s image and a form of ideological control (Paiva, 2019), supported by a geopolitical modernization of air[5] and road transport.
Besides the backdrop of geopolitical reorganization and post-war recovery, the socio-historical production conditions of Hotel Amazonas advertising campaign in the 1950s also encompass a significant urban population growth, resulting in increasing town verticalization and the development of the construction industry; the progressive adherence in the course of the 20th century to a modern lifestyle, including the search for new Brazilian modernity in a range of cultural expressions, from music to architecture; the golden age of cinema, and the expansion of the mass media (radio, television, and press), with greater editorial freedom, since 1946 in Brazil, and a growing influence of public opinion and consumption patterns.

The advertising campaign of Hotel Amazonas was published in diverse printed media, as the newspaper “Estado de S.Paulo” and the widely read weekly illustrated magazine “O Cruzeiro”, where the campaign extended from 1950 to 1953, with more than 20 different ads[6]. In the latter, the enunciative body of this advertising is also completed by the magazine "O Cruzeiro", owned by the Brazilian media magnate Assis Chateaubriand (1892-1968) and the advertising agency "Panam - Casa de Amigos", as its hyperenunciators[7] in addition to the company “Prudência Capitalização” as the main enunciator. Provided by the graphic quality of the illustrated magazine, this advertisement series portrayed a strong visual component with diversified verbal and non-verbal traits, following the pre-launch, inauguration, and the market response of Hotel Amazonas throughout its first years, in which the use of “*green hell*” discursive formula, designating the Amazon biome, is a recurring element (Vitorino, 2020).

Focusing on two of these printed media illustrated advertisements, this article aims to develop a critical reflection on the transmission of environmental subjects in the construction sphere and the usage of modern architecture in the redesigning of the Amazon socio-economic identity, prior to the emergence of environmental and sustainability issues in mainstream and building design culture, both internationally and in Brazil.

2. Discursive Dualisms

The advertisements of Hotel Amazonas in the magazine “O Cruzeiro” typically occupy a whole page or its entire height and were printed in duotone black and white colors, in portrait format. In this campaign, illustrations of plants and animals associated with the Amazon region were recurring elements alongside commercial, real estate, and tourism symbols, and the representation of the hotel building, from an immutable bird's eye view. The slogan throughout the campaign was “Get to know Green Hell enjoying the delights of a Paradise”[8], and during its first two years, it is particularly visible in the advertisement rhetoric the binomial opposition between "green hell"/the Amazon forest versus "paradise of comfort and civilization"/the Hotel, expressed at multiple levels. As of 1952, these references decrease in frequency, giving way to a more playful and didactic approach, with a focus on school excursions and sports activities.[9]

The two ads that are the focus of this research, published in October 1950 and May 1951 (Figure 1), are respectively: the first advertisement of the campaign in “O Cruzeiro”, defining its iconography and slogan, even before the hotel inauguration; and the ad with one of the greatest polemic verbal content of the series, at the light of contemporaneity, combined with a whimsical unrealistic illustration, published shortly after the hotel opening.



1950



1951

Fig.1

In Hotel Amazonas' first advertisement, a postcard with a white border portraying a bird’s eye view perspective of a modern building is surrounded by abundant foliage. On the upper left side of the page, it reads “To be opened soon / HOTEL AMAZONAS / MANAUS • AMAZONAS • BRAZIL".
Below the slogan, highlighted in a circle (“Get to know Green Hell enjoying the delights of a Paradise…”) it can be read in bold and capital letters “STAYING IN HOTEL AMAZONAS”, and in a smaller font, an informative text is presented in italics: “Luxury and comfort in its 49 apartments. / Air conditioning, restaurant, boîte, etc.”

In the 1951’s advertisement, it is written in bold at the top of the page: "A PARADISE IN THE MIDDLE OF AMAZONIA..." and below, next to an illustration of a macaw perched on a roadside sign reading “HOTEL AMAZONAS”, a justified text block with a smaller font states: “There was a time when nature ruled the Amazon ... Raw forest. River-sea. Beasts, reptiles, indians (sic) - green hell! But man's turn has arrived... In the middle of the jungle he built a metropolis; next to *hell,* he built a *paradise* of comfort: HOTEL AMAZONAS! Stay at Hotel Amazonas and enjoy the delights of a tropical paradise. *Common luxury and super luxury apartments with air conditioning, bars, barber, ladies'* beauty *salon, restaurant,* boîte, *and tropical garden.”* The visual space of this advertisement is occupied by a

detailed illustration of three giant *Victoria amazonica* water lilies atop the largest the Hotel Amazonas building is standing, floating in a quiet water surface, extending up to the side and lower limits of the page.

In order to examine the verbal and non-verbal dimensions of these multi-semiotic objects, a multidisciplinary approach is followed, combining the theoretical-methodological procedures of discourse analysis with other complementary qualitative methods. The employed methodology is based on the assumption of permanent dialogues established between a given enunciative object and a set of others that precede and surround it. In the field of discursive studies, the dual-plural facets of language and communication have been identified, in the concepts of polyphony and dialogism proposed by Mikhail Bakhtin, making the relationship with the Other the foundation of discourse. The inherent dualism of discourse analysis is encapsulated within the concept of interdiscourse, which highlights the explicit (intertextual) and implicit presence of discourse within another but also the existence of a global semantic restrictions system that defines an intersemiotic discursive practice (Possenti, 2002).
Affirming the *primacy of interdiscourse* over discourse, Dominique Maingueneau (2001, 2008) proposes another conception of the interdiscursive relationship. Being interdiscursivity prior to discursiveness, that is, having primacy as an object of analysis, results in that the pertinent analysis unit is not discourse in itself but the space for exchanges between several discourses. In this space, the discursive field is understood as the set of discursive formations that are in competition, delimiting each other in a determined region of the discursive universe, whether in confrontation, alliance, or neutrality (Maingueneau, 2008). The conflict between One and it's inseparable Other (verse and reverse) is the condition for the existence of a discursive formation. (Maingueneau, 2008), and each discourse translates the others in their own terms, transforming them to the point that their presence may become nothing more than a "simulacrum" (Possenti, 2002). Given the dialogical character of every statement, it cannot be considered in its autonomous plenitude nor analyzed in isolation, but in comparison with these others, whether in sequence or contrast-rupture.

Other discursive and applied linguistics concepts employed in this analysis participate in a dialogical approach, such as the notions of *scenography* (which institutes a presentation mode within and through the enunciation with its own alternative deictic chronology and topography) and *discursive ethos* (projection of the enunciator, constructed within the text, by the co-enunciators, which sanctions the incorporation of his ethical world, and the adhesion to a shared and restricted discursive community) proposed by Maingueneau (2001). As part of a global semantics approach, the consideration of the addressed themes and its commentaries, identified in these advertisements, also contribute to an interpretation of the effects of meaning produced by them, resulting from the intersection of *verbal and non-verbal* intertextuality, and the seeming binomial polarization between *past-present*, *local-modern*, *wilderness-urbanity*, *nature-human construction* instituted by the scenography tension with its significant “reality”. These are complemented by additional comparisons that confront side by side the architectural representation in these advertisements with that of preceding *modern* architecture models and the Hotel’s *local* context, also as interdiscursive references.

3. A Travel to the Meanderings of Two Hotel Amazonas Advertisements

3.1. Interdiscourse: *verbal* and *non-verbal* intertextuality

The interdiscursive reading of these advertisements points to the existence of different discourse types and discursive formations converging in the advertising space of Hotel Amazonas (Vitorino, 2020). In this analysis, the specific cited *verbal* and *non-verbal* fragments, in association with the slogan, and the intricacies behind the use of the syntagma “green hell”, are observed.
– The *verbal* mention of *green hell* (inferno verde), in bold, capital letters and in quotes, refers to an extended interdiscursive and multicultural line that originally stems from the literary discourse, in the title of the book "Inferno Verde" by Alberto Rangel (1908). This book, written and published during the 1st Amazon Rubber Boom, narrates several short-stories taking place in the Amazon region, among which, one with the same title, tells the tragic adventure of an engineer in search of fortune in the rubber plantations. Based on the harsh realities of South-American rubber industry, encompassing the confrontation with autochthonous elements - the hot and humid climate, mosquito-borne diseases, and biogeographical specificities-, as well as introduced social violence - a debt slavery system, harsh physical work conditions, and isolation-, the book title expression has later become through the press a popular expression within a large range of media and cultural forms, including cinema, giving continuity to a “hellish jungle” discourse, dominant up until the last quarter of the 20th century, and still in use.
– The also *verbal* reference to a *hell-paradise* dichotomy is further derived from religious discourse oral and written traditions, among which Christianism, predominant in Brazil. Deriving from the ancient

Persian expression to designate a garden, a wildlife reserve, or a walled game hunting ground, *paradise* came to express a pleasant and idyllic place, with a mild climate and resource abundance, often outside the earthly plane, in monotheist traditions. Coinciding with the notion of *eden*, paradise designates a place without evil, sin, discomfort, wars, diseases, or death. On the other hand, within a large group of religions and mythologies, *hell* generally designates a sub-world of the dead, and a place of post-mortem punishment and condemnation, sometimes associated with a place or a lake of fire.
– Architectural discourse participates in the intertextuality of the advertisements, through a predominantly *non-verbal* mention of the modern movement and *modern architecture*, which is manifest in the portrayed view of Hotel Amazonas. The building perspective highlights the construction raised on *pilotis*, the *flat roof garden*, and an orthogonal structure allowing the *free designing of plans and façade*, with continuous *horizontal window* and balcony openings from one point of the façade to another, synthesizing a reinterpretation of the “Five Points of a Modern Architecture” by Le Corbusier (1926). In the portrayed image of the hotel it is also implicit the invocation to the Swiss-French architect’s Villa Savoye (1928-1931), with a vertical access curved volume above the terrace, and to previous successful modern Brazilian high-rise projects, such as Prudência Building. On the contrary, the unornamented modern image of the Hotel Amazonas is in stark contrast with the preceding styles adopted in the region, such as the Grand Hotel, in Belém (Figure 2).

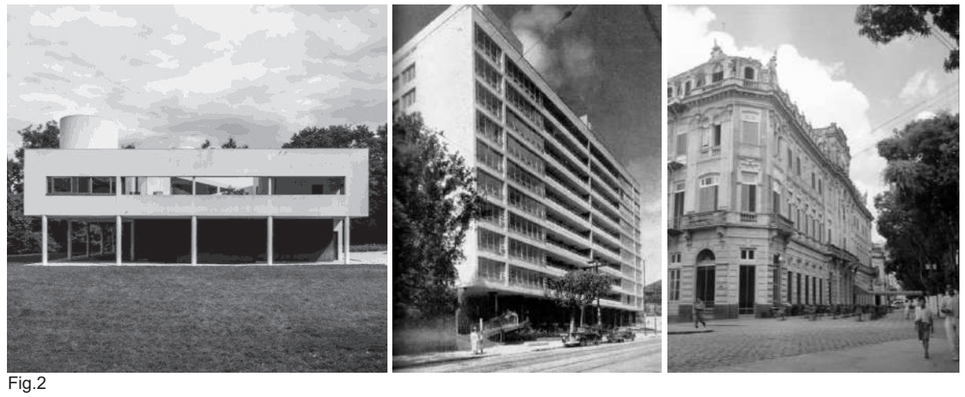


Fig.2

– Other relevant *non-verbal* intertextuality refers, within the pictorial discourse, to an interdiscursive series of paintings and technical illustrations with wildlife subjects, present in naturalistic and travel illustration. The portrayed flora and fauna elements refer with particular emphasis to the paradisiacal depictions that follow the register of America's colonized territories since the 16th century, as well as to the stylized representation of natural elements of exotic destinations in tourism advertisement posters of the mid-20th century (Figure 3).

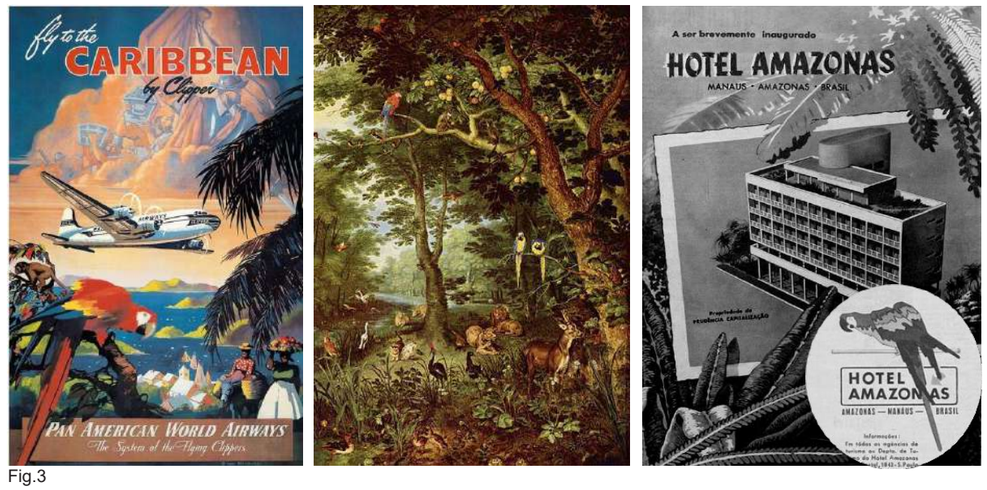


Fig.3

3.2. Semantic themes and discursive ethos: *past-present, wilderness-urbanity, nature-man*

In the 1950s 1st advertisement, it is established through the slogan and iconography a polarity that opposes (and somehow merges the access to) an Amazonian green *hell* to be discovered – represented by all-surrounding foliage -, and the delights of a built *paradise* – object of a travel postcard souvenir - to be enjoyed at Hotel Amazonas.

The duality between the subjects green *hell/*comfort *paradise* is further unraveled in the 1951's ad, verbally structured around additional thematic binomials: *past-present*; *wilderness-modernity,* and *nature*-hu*man* construction. The valuation attributed to these contrasted binomials is explicit through linguistic marks, such as the use of the conjunction *"but"* anteceding and defining the textual thesis: *"man's turn has arrived… (…)"*, in contrast with the preceding *"There was a time when nature ruled the Amazon… (…)",* defining, by inverse association, nature domination by man as a definitive act from the moment he builds and constructs. A schematic organization of these verbal semantic oppositions, and the evaluative standing of enunciator and co-enunciators, as shared discursive community, towards them, are shown in Table 1.

Table 1.

(-)	(+)
• remote *past* "a time when nature ruled the Amazon"	• *present* and future "man's turn" "to be opened soon"
• *nature* and *wilderness* "in the middle of the jungle" "next to hell" "in the middle of Amazonia"	• *urbanity* and hu*man* construction "a metropolis" "a paradise of comfort" "a paradise"
• "Green *Hell*" "Raw forest. River-sea. Beasts, reptiles, indians (sic)"	• "the delights of a *Paradise*" Hotel Amazonas "Luxury and comfort in its 49 apartments. Air conditioning, restaurant, boîte, etc." "a tropical paradise" "Common luxury and super luxury apartments with air conditioning, bars, barber, ladies' beauty salon, restaurant, boîte, and tropical garden"

Despite the *verbal* confrontation of Hotel Amazonas' modern construction to its "Green Hell" wild and hostile context, *non-verbal* signs point to more diffuse thematic associations. Although the image of the Hotel - highlighting the geometrical volume raised on pillars, the bioclimatic balconies, and the roof garden terrace - as a paradigm of modern architecture, transmits an image of construction comfort and luxury in the course of Brazilian 1950s; the illustrations of Amazonian flora and fauna, in the form of macaws, water lilies and palm trees, rather than expressing an antagonizing nature, convey more the idea of a delightful tropical paradise that frames and embellishes the lodging and its touristic sights. Such is the case of the farfetched illustration of the weightless hotel building, leisurely floating the calm Amazon waters atop a giant *Victoria amazonica* leaf, in the 2nd ad.

As revealed by *verbal* orality marks in the two advertisements, the discursive ethos echoes the theatrical intonation of radio and cinema commercials, with pauses, ellipsis and exclamation marks, and the *visual* resource to expressive font types as seen in adventure films and books, with highlighted text in bold, italic and capitals. Coinciding with the enunciative body's *previous ethos*, the enunciator behind Hotel Amazonas may therefore be understood as a representative of a modern leisure world. The persuasive invitation to its restricted world, based on a shared ideological framework with its interlocutors, presumes their familiarity and acceptance of the "green hell" discursive formula as a designation of the Amazon rainforest (in the 1st ad) and assumes the prevalence of anthropocentrism and racist coloniality within their mind-set (in the 2nd ad), along with a desire for modernity and the curiosity on Amazonia jungle wildlife and fictional reminiscences. Thus, staying at Hotel Amazonas, they are granted access to a built metropolitan comfort scenery - with all the amenities provided by modern architecture and technology, as room acclimatization, that mediate the local environment -, and simultaneously to an exotic and controlled tropical adventure realm.

3.3. Scenography: *past-present/present-future, modern-local, fiction-reality*

In Hotel Amazonas advertisements, the scenography is hybrid, recurring to exogenous discursive forms and validated scenes - as often is the case with publicity -, such as the postcard, the real estate leaflet, cinema, and tourism posters, radio broadcasts, movie trailers and illustrated news. In the 1st ad, it is particularly relevant the resource to the architecture travel postcard, as a validated scene, settled in the collective cultural memory, in association with tourism and leisure[10], while in the 2nd example, are more relevant the reference to adventure books and film poster imaginaries, and the photo-journalism layout of verbal and visual elements.

As part of the text adhesion strategy, the scenography establishes, through verbal and non-verbal mechanisms, an alternative deictic chronology and topography. Tensioning *present-future*, in the case of the 1950's advertisement, the inauguration and success of the future hotel "To be opened soon" is anticipated through a postcard of the built and finished hotel, an object of foreseen travel souvenirs to the Amazon region. In the 1951's, on the contrary, it is the *past-present* divergence that is highlighted, through verbal time indicators that range from an almost remote past "There was a time…", and a past prolonged into the modern present ("… man's turn has arrived" "he built a metropolis" "he built a paradise of comfort").

Regarding typography, both advertisements portray numerous verbal place indicators, including the informative "Manaus • Amazonas • Brazil", and the metaphorical "in the middle of Amazonia", " the middle of the jungle", "next to hell" as defining locations of Hotel Amazonas. The advertisement's non-verbal signs also contribute to transmitting the proximity of Hotel Amazonas to the contrasting *Green Hell* and therefore convey the notion of the hotel immersion within Amazonian nature. This idea of a location in a wild remote site is reinforced through various non-verbal elements, such as the abundant foliage that surrounds and partially covers the postcard of the hotel; the supernatural size of the Amazonian water lily that carries and shrouds the hotel building, within an infinite water surface; and the macaw perched on a roadside sign, as a symbol of exotic rusticity and remote tropical location.

In both advertisement representation of Hotel Amazonas, the omission of its *real* context is significant, in order not to contradict this fictional scenography. Thus, the *local* urban context of this *modern* hotel is deliberately avoided, since it is neither located amidst a natural scenery setting neither in entirely modern background, but instead is surrounded by past metropolitan infrastructures, neoclassical and eclectic style buildings, and tramway rails and cables, built during the former Rubber Boom prosperity periods, and framed by scarce urban greenery (Figure 4). The fictional scenography tension with the real topographical context of Hotel Amazonas and the contrast between this modern building with the local preceding architecture styles and surroundings is further illustrated by the comparison between the portrayed postcard in the advertisement and a real photographic postcard in circulation after the hotel inauguration (Figure 5).

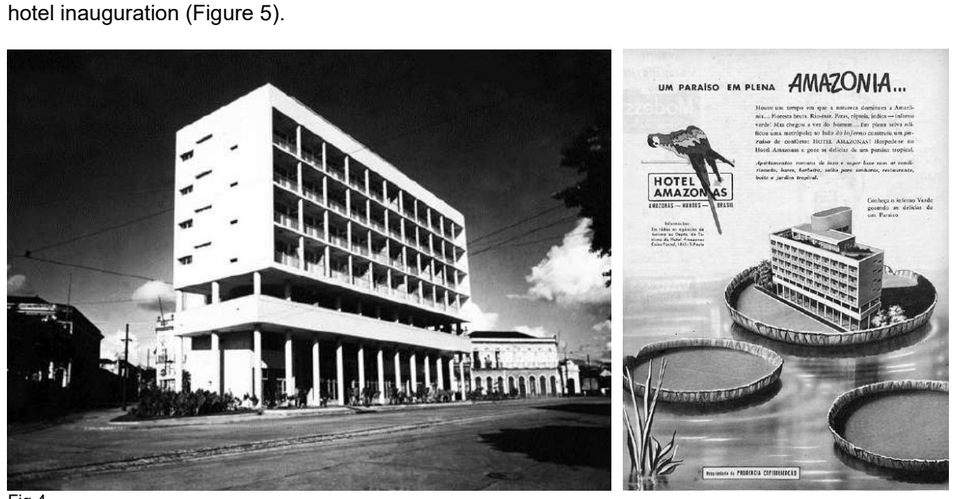


Fig.4

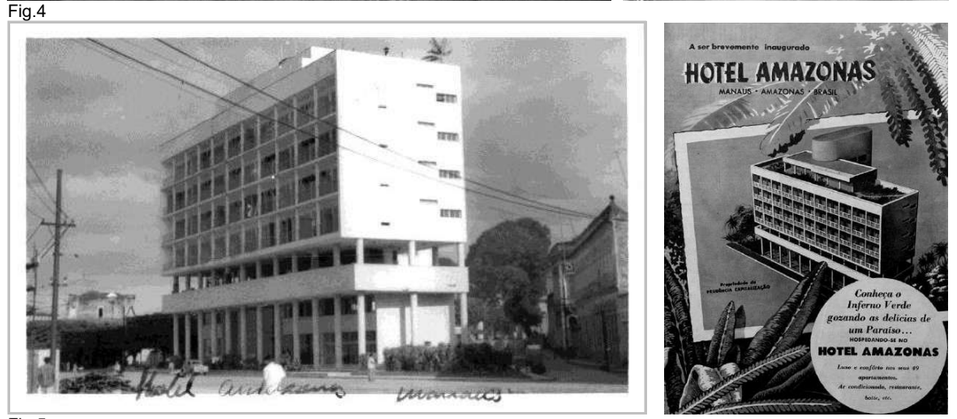


Fig.5

4. Discussion and Synthesis

The results of this research highlight the binomial organization and discursive divergences, supported by a visibly dualist slogan, of two of Hotel Amazonas advertisements, published within the widely read illustrated magazine “O Cruzeiro” in early 1950s Brazil. In effect, among the interdiscourse, semantic themes, discursive ethos, and scenography summoned within Hotel Amazonas advertisements, it is possible to discover a simultaneity of tensions regarding the twofold relationships of *verbal/non-verbal* language, *past-present, wilderness-urbanity, nature*-h*uman construction, modern-local*, and *fiction-reality,* which the dual structure of the analysis has contributed to identify.

Within the discursive space of these advertisements, interdiscursive literary and historical references invoke the expression *green hell* – designation of the Amazon rainforest, rooted in the rubber extraction era, associating it with an exceptional threatening region, - hereby appropriated for tourism purposes. Together with the suggestion of a *hellish-paradisiacal* contrast, derived from religious interdiscourse, and a multi-semiotic scenography associated with both modern architecture and refined illustrations of exotic tropical biodiversity, which are juxtaposed, the use of this expression attempts to create the illusion that Hotel Amazonas would be an isolated island of comfort, civilization, and modernity in a remote and wild universe.

Nevertheless, the advertisements of this hotel also embody the simultaneously present and opposing ideas that the Amazonian natural space, flora, and fauna (and by extension, other South-American and tropical biomes) can echo a scenario of either tropical hell or tropical paradise – a bipolar perception historically connected with colonization, and the foreign perspective of colonizers. This ambivalence is revealed in the advertisements by non-verbal interdiscursive hints to exotic paradisiacal representations and nature painting, even though verbal references to paradise point more frequently to Hotel Amazonas' built world. After all, in this building project - of metropolitan comfort and luxury, room air conditioning, and multiple services and facilities – Amazonian flora and fauna were celebrated in colored art prints and object of wonder within a tropical garden, where selected local plant and animal specimens could be observed and admired by the hotel guests. As such, while *green hell* would symbolize a mythical nature in a “raw” state, *tropical paradise* would embody the idea of a tamed and confined nature, resemblant of the Amazonian rainforest, but observable in comfort and safety, devoid of its threatening aspects.
Also, the use of the *“green hell”* formula is cited in this advertising campaign as an element of simultaneous discursive attraction and repulsion. In addition to the persuasive invitation to Hotel Amazonas built world, there is an inherent call in its slogan to discover *Green Hell* - the Amazon region and its natural heritage - which, despite its connotation with discomfort and danger, also implies the recognition of interest values in its exoticism as privileged space for adventure, leisure, tourism, or contemplation - values currently understood as cultural ecosystem services. In its appeal, the expression is also pervaded by a fictional imaginary longing, the affirmation of local identity, and perhaps the nostalgia for earlier economic prosperity. On the other hand, the resource to *“green hell”* as evocative of a nearby dangerous and painful place, reminiscent of a remote primitive and unmodern past, follows the production objectives of a “simulacrum”, alongside which the Hotel Amazonas gains attractiveness, by contrast.

In this sense, the use of the *green hell* formula, within the construction, architecture, real estate, tourism, and, by extension, the geopolitical discourses in Hotel Amazonas discursive field, has served to perpetuate the notion that natural forest areas only are *paradise,* when walled, domesticated and urbanized spaces. As evidenced in the polemic text of the 1951’ advertisement, it is observed that the mid-20th century project of a technological modernity future is still anchored and traversed by deeply rooted concepts of anthropocentrism, coloniality, and racism – whose discourse entanglements have earlier been identified as an obstacle to local ecology and environmentally viable development, by the naturalist Alexander von Humboldt (1769-1859) in his scientific excursions to American territories (Wulf, 2016).
Furthermore, as often happens in the irradiation path of discursive formulas (Krieg-Planque, 2009; Maingueneau, 2015), “*green hell”* syntagma has been the subject of meaning disputes, eventually deviating from its primary source. The warped definition offered by this advertisement is to an extent distant from the almost mythical and wilful nature entity resisting foreign exploitation, as depicted in Rangel’s short story “Green Hell”, and very far from the regional socio-historical complexity addressed in the diverse tales overarched in his book with the same title. While rooted in the context of Amazonian natural latex extraction 1st boom, the “*green hell*” expression within Hotel Amazonas advertising campaign is devoid of the anthropogenic responsibilities of the rubber industry hardships, which prolonged up to 1945, and limited to pre-colonial rainforest autochthonous elements.

Concomitantly, as an expression of a desire for modernity, assumed in rupture, oblivion, and erasure of the recent past, the advertising campaign purportedly removes from its images the urban context of the hotel, with references to Manaus pre-modern architecture. In a process of economic reformulation of the Amazon region, the local rubber boom past is thus object of deletion, shifting the focus to the tourism industry where the latex extraction was no longer profitable. Attending to the nationwide relevance attributed to the construction of this modern hotel, engendering the illusion of architectural immersion in an inhospitable natural universe is therefore understood to be more than a mere isolated commercial strategy of these Hotel Amazonas advertisements but in effect part of an attempted recreation of the memory and identity of the Amazonian space, in accordance with the novel national image - nonetheless permeated by longstanding discourses - being projected at the time.

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Notes

1 In Portuguese: Edifício Ajuricaba. Named after Ajuricaba, a leader of the Manaós Indian tribe in Amazonas, who became a symbol of indigenous resistance to the Portuguese colonial occupation, opposing the commercialization of Amerindian slaves in the region and leading a revolt against European occupiers, during the 18th century.
2 "Prudência e Capitalização" company was also later the developer of Brasília Palace Hotel (1958), designed by Oscar Niemeyer (1907-2012).
3 As Southeast Asia rubber plantations became under the control of Japan.
4 In Portuguese: Departamento de Imprensa e Propaganda.
5 As stated by Segawa (2016), airports, which are functional architecture programs from the 20th century, have been relevant modernization fronts in the Brazilian architecture landscape. In Manaus 1954, the new Ajuricaba Airport (Ponta Pelada Airport) would also portray a distinct modern language, as part of a strategy for a geopolitically relevant region as Amazonia.
6 Material at the online collection of the Durango Duarte Institute "Publicidade Antiga (1950 a 1970)". In: *Acervo Digital Online*, available at: https://idd.org.br/topicos/iconografia/publicidade-antiga/de-1950-a-1970/page/8/?post_type=acervo
7 Their role and influence in the discursive ethos of Hotel Amazonas advertisements, particularly in its previous ethos, is further discussed in an earlier publication (cf. Vitorino, 2020).
8 In Portuguese: "Conheça o Inferno Verde gozando as delícias de um Paraíso".
9 The discursive variations of the whole Hotel Amazonas advertisement campaign are subject of analysis within a current post-doctoral research project developed at PUC-SP, on the dissemination of the "green hell" discursive formula.
10 As mentioned by Segawa (2016), for the most part of the 20th century and especially before the popularization of non-professional photographic cameras, postcards had broad international circulation, both as correspondence items and travel souvenirs, including architectural subjects: "Landscapes and buildings were pictorial material for recognition and identification of memorable places in the imaginary of the society, and the registry of travelers' recollections.", whose images were sometimes analogically retouched and manipulated.

Image and Table Captions

Fig. 1. Left. *O Cruzeiro*. Rio de Janeiro: 1950.10.07, ed. 51, p. 62. Right. *O Cruzeiro*. Rio de Janeiro: 1951.05.12, ed. 30, p.48.
Fig. 2. Left. Villa Savoye. [Thomas Nemeskeri. 2014]. Center. Prudência Building. [*Acrópole*. Sao Paulo. 1951, no. 154, p. 259]. Right: Grand Hotel. [Robert Larimore Pendleton, 1949].
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Fig. 4. Left. Hotel Amazonas. [Silvino Santos Collection]. Right: *O Cruzeiro*. Rio de Janeiro: 1951.05.12, ed. 30, p.48.
Fig.5. Left. Undated postcard of Hotel Amazonas. Right. *O Cruzeiro*. Rio de Janeiro: 1950.10.07, ed. 51, p. 62.

Table 1. Verbal semantic themes in Hotel Amazonas 1950 and 1951 ads. Translated and adapted from Vitorino (2020).

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Biography

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Being Public in Private Spaces and Vice Versa:
Brazilian Art and Architecture in the Late 1960s

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Abstract

At the turn of the 1960s to the 70s, the architect Vilanova Artigas designs two houses that are among the most radical of his career. With blind facades, built in exposed concrete, and providing very little privacy to its residents, the Telmo Porto (1968) and Martirani (1969) residences are "aesthetic guerrilla" experiments, carried out, not by chance, at the moment when the hardening of the military regime in Brazil reached its peak. They are houses designed as urban spaces, in which bourgeois intimacy should be suppressed.
At the same time, artist Hélio Oiticica performs, during those same years, his main environmental works (Penetrables), on display at the Whitechapel Gallery in London, in 1969. Building fabric tents, with sand, water, and hay floors, in which people could enter and take shelter, the artist created what he called "participation spaces", giving the gallery's public space a domestic and intimate connotation. Describing this set of works by Oiticica, the American artist Vito Acconci observes that he managed to understand, from them, another form of public space, formed by the collective exhibition of multiple private experiences.
At that decisive moment in the country's political history, Artigas and Oiticica are among the protagonists in the cultural field. It is nevertheless revealing, therefore, to realize how much their poetics are distinguished. Such a distinction, however, is not a sign of a simple opposition between visual arts and architecture. Considering the fact that the two are linked to constructive artistic strands, it is remarkable that the oscillation between the public and private spheres, in their works, reveals an important peculiarity of Brazilian culture and society: a habit of permanently invading the public sphere for private interests, for personal relations of favor. In this sense, Artigas and Oiticica deal with similar issues, but in different ways.

Keywords: Vilanova Artigas, Hélio Oiticica, Public, Private, Urban, Domestic



Fig 1.

At the end of the 1960s, Brazilian architecture certainly arrives at one of its moments of greatest radicality. Almost a decade after the inauguration of Brasília, the center of gravity of national architectural production had already moved from Rio de Janeiro to São Paulo, the country's industrial and financial heart. Born inside the School of Engineering, rather than Fine Arts – as had been the case in Rio –, the teaching of architecture in São Paulo had more technical stress. At the same time, its buildings had to find ways of incorporating the opacity of a city that grew very rapidly and chaotically, under the predatory impulse of property speculation. Thus, unlike what happened in Rio, *Paulista* architecture did not develop an open and transparent relation between inside and outside, based on formal lightness and a hedonist integration with tropical nature. As a consequence, it distanced itself from those traits that became identified with what was recognized abroad as the "Brazilian style".[1]

If *Carioca* modern architecture appeared, in the 1930s, under the auspices of the first "purist" Le Corbusier, São Paulo architecture of the 1960s was strongly influenced by the last, "brutalist" Le Corbusier. Vilanova Artigas, the leader of this group – the so-called "Paulista School" – combined the critical aspect of the revision of the 'machine utopia' the Swiss-French master undertook in the bitter postwar context[2] with a clearly Marxist perspective, for whom the conspicuous traces left by the wooden molds on the concrete read as signs of labor in the final work, preventing the fetishistic reification of the finalized construction. An active member of the Brazilian Communist Party, Artigas employed huge masses of concrete as agonistic explicitness of social conflicts through the form. His brutalism is, therefore, an almost literal expression of architecturally-interpreted dialectical materialism.

Already in 1950, the Italian architect Lina Bo Bardi, then recently arrived in Brazil, had premonitorily observed that Artigas' houses did not obey 'the laws followed by the routine life of man', but, on the contrary, imposed a vital law on him, 'a moral that is always severe, almost puritanical.' (Bo Bardi, 1950: 05) And, almost twenty years later, between 1968 and 69, Artigas would effectively come to prove her entirely right, designing and building those that are the two most radical houses of his career: the Telmo Porto (Fig. 1) and Martirani residences. Both are boxes of visible concrete, almost completely blind, and facing nothing but their own interiors. In the case of the Telmo Porto residence, in particular, the rooms even lack windows, and the ascendancy of concrete and cement as material for floors, banisters and general furniture gives it a uniquely rough aspect. This process culminates in Mendes da Rocha's Fernando Millan residence (1970), in which the architect chose to make the living room's floor in asphalt, as an extension of the environment of the garage into the house. Here, again, bedrooms do not open onto the outside; their internal balconies give on instead to an unusual interior view: the kitchen.

And, just as in the house the architect built for himself in 1964, the rooms' walls do not touch the ceiling, making the internal space of the residence, from the standpoint of noises and odors, a single, continuous environment. It is, as Flávio Motta puts it, a space created as a 'social project', whose starkness supposes a 'mode of living akin to *something like a rationalized* favela', where 'each one accepts sharing space with all the others, without solid barriers, but in new conditions of human respect to be sought for'. He concludes: 'It is a proposal that demands a response because it is a work of creation that implies its social responsibility.' (Motta, 1967: 18)

As these examples make clear, what architects such as Artigas and Mendes da Rocha were looking for at that point was the urbanization of domestic life, that is, a maximal abolition of intimacy, extirpating personal idiosyncrasies tied to the romantic, bourgeois idea of home – achieving, for instance, a fusion of architecture and furniture by means of continuous pieces. What they wished, thus, was to abolish private space and its secrets in favor of a civic idea of totally public life: the house as a form of the city's collective life, where one's freedom is reciprocally shaped by the other's, given that the rules of social order control the will of individual subjectivity. Hence Motta's observation that they demand a response, that they elicit reactions. These houses are thus entirely exteriorized, even if spatially introverted.

Brazilian art was arguably also reaching one of its most acute points by then. Hélio Oiticica's Whitechapel Gallery show (Fig. 2), which took place between February and April 1969 in London, is a case in point. Oiticica was already deep into his quest to break with representation- and contemplation-oriented objectual art, transforming the spectator into a participant, and bringing the body into the work's experience in increasingly active ways. He called this 'environmental anti-art'. The point was to blur – and, ultimately, eliminate – the border between art and life, unfolding an avant-garde project that goes back to constructivists such as Mondrian and Malevich. A project that led the Brazilian artist to 'duplicate life in ever more powerful interiors', which was nevertheless, precisely for that reason, 'ever more preserved from the world's contagion', as visual artist Nuno Ramos sharply observes. This 'little paradox', which Ramos sees as the 'poetic kernel' of Oiticica's work, sets the tone for much of Brazilian contemporary art: the act 'of materializing the work in the world ends up by creating a refuge inside the latter'. (Ramos, 2007: 121-123)



Fig 2.

More than a big retrospective of his career, the *Whitechapel Experience* is where the *Eden* project – a gathering of tents, beds, nests, and penetrables interwoven by winding paths of sand and stone – was first realized, It was to be an environmental structure that would found the gallery

space anew as a ‘participation-place’, promoting, in the artist’s words, ‘the creation of freedom in the inside-determined space’. (Oiticica, 1986: 186) These installations should be used and even ‘inhabited’ by the show’s visitors-participants, domesticizing public space (the art gallery). Bed-bolides and penetrables with foam floors, sack-blankets, and nylon nets created a space where it was possible to lie down after having walked on fields of sand, hay, and water, and to this position, oneself ‘waiting for the internal sun, the non-repressive leisure’. (Oiticica, 1996: 136) Such environments served as experimental modules for the construction of ‘house-spaces’, as Oiticica called them, prefiguring the idea of a ‘new world-leisure’, that is, of ‘creleisure’: the promise of a world where ‘I, you, we’, the artist continues, ‘each one is the mother-cell.’ (Idem: 136-137) In short, Oiticica tried to create, in *Whitechapel Experience*, a ‘womb’ space, where the joy of being absorbed in its ‘childish warmth’ could instill a new behavior in the people arriving ‘in from the cold of the streets of London, repetitive, closed and monumental’. (Oiticica, 1986: 130) The womb’s coziness as an antithesis of the city’s cold and impersonal space.

In the documentary film *Héliophonia* (2002), by Marcos Bonisson, there is an interview in which North American artist Vito Acconci declares that his artistic trajectory was greatly influenced by Oiticica after both artists took part in the collective show *Information*, at the Modern Art Museum in New York, in 1970. Acconci refers in particular to the short circuit, then created by Oiticica, between the public and private spheres – his cell *Barracão n. 2*, consisting of a series of ‘Nests’, invited participants to ‘inhabit’ his works (and thus also the museum) in a playful way, making what would normally be a space of transitory occupation into one of permanence. For Acconci, these capsules for inhabiting the museum revealed a new conception of public space, where one could at once ‘be in privacy and in relation to other people’. (Acconci quoted in Braga, 2008: 268) In contrast to a public space generically open to all, like a park or a square, *Barracão n. 2* was a heterogeneous composite of private units.

It is worth recalling that *Service Area*, Acconci’s work featured in *Information*, consisted of forwarding his own private mailbox to the exhibition space, making him go to the museum on a daily basis to check his mail. At the same time, he was also working on *Room piece* (1970), in which he would move personal objects from different parts of his flat to the Gain Ground gallery, also in New York, transforming the 80-block distance between the two places in an expanded inhabitation space. The ‘exhibition’ was, then, according to Acconci, ‘the activity from one point to the other’, and what was exhibited was, in fact, this activity itself. (Acconci, 2005: 205) We find here the matrix of a trajectory that Acconci would radicalize in the following years: the unmediated transit between intimate secrecy and publicity.

Back to my initial subject, it is interesting to note that, in the Brazilian case, if the brutalist houses by Artigas and Mendes da Rocha sought to urbanize domestic life, Oiticica’s penetrables, inversely, intended to domesticize public life. Interiorization and exteriorization. Additionally, if categories such as collectivity and industry were guiding principles for the architects’ project, as they mobilized weight and an austere, somewhat puritanical material roughness, the artist’s proposal was oriented towards intimacy, leisure, and receptiveness, guided by a light, hedonistic craftsmanship. A significant contrast, therefore.

It does not follow, however, that architects and artists should be placed in schematically opposed poles. These crucial differences aside, what both sides were doing at that point was problematizing the boundaries between public and private spheres so as to transcend them, inventing, in the process, new and demanding ways of living. As a matter of fact, Flávio Motta’s acute depiction of these São Paulo houses as ‘rationalized favelas’ pinpoints their quality of spatial indeterminacy. For they refuse *a priori* environmental limits and conventions and open instead onto the intersubjective conditioning of their users *qua* action and reaction. It is then no coincidence that the large internal spaces of the University of São Paulo’s School of Architecture and Urban Planning (designed by Artigas in 1961, but opened, precisely, in 1969), with its active and fluid play of loose, uneven planes – alternately ochre and grey, opaque and transparent – can be easily associated, on sight, to Oticica’s *Nuclei* (Fig. 3), environments formed by the explosion of the two-dimensional support and by the autonomy of chromatic tonal planes, suspended in the air in a continuous, non-hierarchical fashion. The case is that, if Artigas and Mendes da Rocha thought of themselves as forcing a more responsibly civil behavior in a country with a patrimonialism heritage, Oiticica, in turn, affirmed subjectivity as the irreducible antidote to

the instrumentalization of social relations, through experiments in explicit and provocative public unproductivity.



Fig 3.

On December 13th, 1968, the Brazilian military regime, which had begun with a *coup d’état* four years before, issued the Institutional Act 5 (AI-5), a decree that dissolved the parliament, instituted censorship over the media, severely restricted civil liberties, and made torture official. The regime’s hardening responded to the unique political and cultural effervescence that began in 1967, with the radicalization of the student movement and the rise of groups and movements such as Cinema Novo and Tropicalismo, among others.[3] After the AI-5 – and especially until the end of president Médici’s government, in 1974, the dictatorship’s so-called “years of led” –, many artists, students, and intellectuals were arrested, tortured, exiled or murdered, and political and artistic movements suffered serious limitations or went underground. Artigas and Mendes da Rocha were discharged from USP in 1969 and barred from working in Brazil. Artigas, in fact, had already been arrested in 1964 and spent almost a year in exile in Uruguay. In 1970, after receiving a Guggenheim Foundation grant, Oiticica moved to New York in a sort of voluntary exile that would last eight years. The artistic manifestations that survived did so in more clandestine circuits and often radicalized their experimental ‘negativity’, resorting to a kind of combination between political and ‘artistic’ guerrilla.

In Hélio Oiticica’s 1966 ‘environmental program’, created two years after the the Parangolé, the artist declared that ‘the museum is the world’, that is, ‘everyday experience’, and proposes works of art that are really vital, to be spread across the cities vacant lots like ‘some lost work, carelessly left about, to be “found” by passers-by, sitters or wanderers’. (Oiticica, 1996: 104) The materialization of this proposal will be his ‘fire-tin’, which Oiticica describes thusly: ‘it is the work I singled out for the anonymity of its origin – it exists around as a sort of communal property: whoever has seen the fire-tin singled out as a work cannot help remembering having seen also as a “work”, in the dead of the night, others scattered about in the city like cosmic, symbolic signals. Nothing could be more moving than these lonely tins lit up at night (the fire in it never goes out) – they are an illustration of life: the fire lasts and suddenly one day it goes out, but while it lasts it is eternal.’ (Idem)

Clearly, therefore, that was a moment when Brazilian artists showed strong resistance against adhering to a more edifying dimension of public space. This can be explained, I believe, both by conjunctural issues – the association, inevitable at that point, between the public and the repressive official element incarnated by the military regime – and the structural mark of a historical weight: the country's colonial, slave past, not fully interrupted by the independence (1822) and the creation of the republic (1889), and thus still unfolding in modern times, in the debility of its institutions, so often taken as vehicles for personal interests. This 'patrimonialistic' practice is a powerful trait in the Brazilian modernizing process, as pointed out by scholars such as Sérgio Buarque de Hollanda.

In his analysis of Oiticica's obsession with the labyrinth as a metaphor for plunging into an infinite interiority, Nuno Ramos recalls a short story by Jorge Luís Borges that describes the desert as the greatest of all mazes: the 'labyrinth of pure exteriority'. He draws from this image an important term of comparison between Brazilian and North American art of the 1960s: 'It is curious that the North American art of H.O.'s [Oiticica's] time should have chosen the desert, the extreme labyrinth of Borges' tale, as an operative space, drawing a line on its dry ground, digging a negative double in the canyon or constructing a spiral on the surface of a salt lake.' (Ramos, 2007: 126) Besides, the very relationship that the works in both countries establish with the body is indicative of cultural difference, since, as Ramos also shows, Bruce Nauman's installations could very well be seen as 'penetrables' that envisage the body as a center of stimuli and responses. However, unlike Oiticica, 'Nauman treats the "I" like an automaton, a Pavlovian rat paralyzed by contradictory stimuli.' (Idem)

If we were to compare North American Land Art to Brazilian references in terms of their scale and intrinsic poetics, we would necessarily have to evoke the experience of Brasília's construction (1956-60), in the heart of the country's unpopulated Central Highland. It is remarkable, though, that the flight into the desert represented in the United States a movement of radical de-institutionalization and de-commodification of art, following the North American myth of the 'open road'[4], while in Brazil, on the contrary, it signified the exile of the state itself, somehow making explicit and consecrating the country's eternal lack of a public dimension.

It is no coincidence that Public Art should become a heated topic in the United States ever since the 1960s. Sculptures like the *Chicago Picasso* (1967), or Calder's pieces in Grand Rapids and also Chicago (*La grande vitesse*, 1969, and *Flamingo*, 1973) became successful, publicly valued references in the places where they were installed. My aim is not to discuss the self-referent 'nomadism' of modern sculpture and the critical uniqueness of site-specific works, but rather how distanced pieces by Picasso, Calder, Moore e Noguchi, as well as Richard Serra, placed in important squares in urban centers, are from Oiticica's 'fire-tins', anonymously left to self-consume in vacant lots at night. Whether they are positive or negative in terms of physical insertion, North American artworks deal with a very concrete sense of public value. Society generally assumes this sense, and this is reflected in the legislation concerning municipal incentives, such as the Percent for Art program introduced by many cities across the country, as well as in the intense judicial battles that surrounded some of these works, such as Serra's *Tilted arc* (1981-89). With this abyssal difference between the two countries in mind, sculptor José Resende contests the idea that an art piece placed in urban space can be directly considered public art. He says: 'I think that the concept of public thing cannot be defined by the simple presence in a public place. For art to be public, it is necessary that culturally speaking, it also become so.' He concludes: 'It is hard to define what would really be a work of public art in Brazil. Music, for example, does indeed have here this character of being in a public domain.' (Resende quoted in Carneiro and Pradilla, 1999: 11-12)

In the catalog of *Fronteiras*, a public art project undertaken by the Itaú Cultural Foundation between 1998 and 2001 in different parts of the Brazilian South, critic Sônia Salzstein departs from the outcome of that event in order to offer a brief diagnostic of the meaning of 'public scale' in Brazilian art. Her evaluation, to which I subscribe, allows me to extend into the present day, even if with a certain degree of generalization, the issues I identified apropos of that crucial passage from the 1960s to 1970s. Thus, for her, the Brazilian peculiarity regarding public art may lie in 'the fact that the geographic scale of the approach to the territory did not bring with it the rationality of an urban and technological culture, nor the adhesion to a public space morality that

it presupposes'. (Salzstein, 2005: 13) Such a remark should be supplemented by recalling that the very historical formation of Brazilian cities, from their origin in Portuguese colonization, lacked abstract plans that might have imposed public order in the guise of a blueprint for the whole city. Unlike the Cartesian grid that organizes Spanish colonial towns around a 'plaza mayor', cities in Brazil have tended to organize themselves by departing from the protagonism of certain buildings and from particular adaptations of their patterns to uneven terrains, rather than from a general regulating principle. Likewise, their squares have rarely acted as generative elements for the surrounding ensemble. More often, they were leftover spaces from the irregular configuration of the lots – such as the *largos*, for instance – or subsequent evolutions of the yards and forecourts of churches. (Teixeira and Valla, 1999: 218) They are, therefore, spaces that were not born public, and which, once turned public, only manage to remain so precariously. On top of that, and not coincidentally, we can identify a historical tendency of Brazilian cities to remain alien to the presence of art, which is in turn reflected in a timid 'public culture' among the local artistic milieu.

It is interesting to observe that even in the production of artists belonging to a construct avant-garde, like Neoconcretism, who attempted to enact space itself in the guise of artworks, the question remains. As Salzstein remarks: 'It cannot but be a cultural peculiarity that Brazilian constructive art, once emancipated from the frame and the support and confronting the immediate experience of space, would only allude in an oblique or, at the very least, reticent way to the question of the city; the latter, in any case, was almost always understood as "external" space.' For, she continues, 'even in Hélio Oiticica's work, which seemed to aspire to an urban sociality, the city loomed in its negative form, so to speak – as the 'place' that resisted subjectivity; the place that antagonizes the experience of individuation and subjectivation presupposed in the sphere of art. The artist's interest in the environment of the favela is significant in this regard; a space of decompression germinating against the grain of the city, and enlivened by community rituals.' (Salzstein, 2005: 23)

In the light of the issues raised here, I believe that Brazilian 'public art' has achieved more powerful results when it subverted the space of publicness of museums and galleries by means of a transgressive invasion of the private sphere, as in Oiticica's examples here than by producing remarkable works in urban space that could resignify the public sphere itself – an eternally problematic dimension in Brazil. In this sense, maybe visual arts manifest something akin to what is seen in Brazilian popular music, where Bossa Nova, the style that attained the greatest universality, was entirely based on an intimate and somewhat amateurish – if never timid, let alone regressive (Mammì, 1992: 67) – diction, which seemed to make public the whispered singing of friends inside a small living room.

Returning to the example of Vilanova Artigas' and Paulo Mendes da Rocha's brutalist houses and schools, our point of departure and arrival, it is necessary to remark that, despite the urban discourse that accompanies them, they belie a clearly defensive stance towards the city. That is, no more than the visual arts, they do not act in the conflicted arena of urban space so as to transform it, or to allow themselves to be transformed by it. On the contrary, they seem to derive from a renunciation from the attitude of insisting in the transformation of that chaotic and decayed tissue, compensated, on the other hand, by a new utopian wager in the creation of protected laboratories for a more candid and generous new sociability in the inside of buildings. Hence the fact that the latter's openings should turn upwards – they are skylights, 'windows onto space', in Mendes da Rocha's expression (Rocha, 1970: 35) –, and not sideways, that is, towards the city. Likewise, the rigorous external rigidity of these buildings, in the guise of blind concrete boxes, is what dialectically enables the creation of an extreme internal spatial indeterminacy, further prompted by interpenetrating environments and allowing for previously unforeseen uses. So much so that, if we just replace those heavy concrete "curtains" with diaphanous tulle ones, we might catch a sudden glimpse of the School of Architecture building (Fig. 4) as if it were an enormous penetrable.

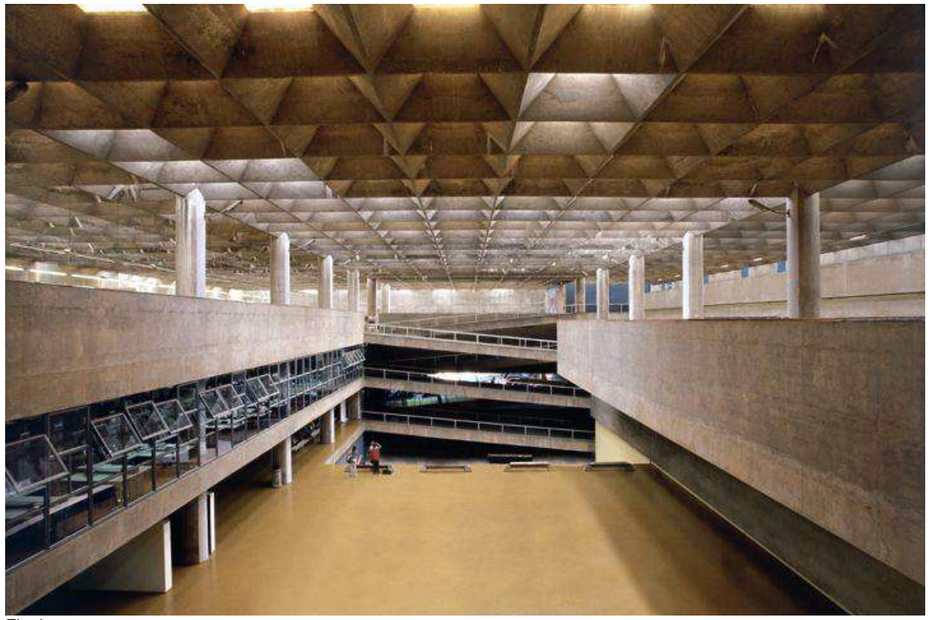


Fig 4.

Notes

1 On the term ”Brazilian style”, see Reyner Banham (1962). “Brazilian style” became world-famous after the 1943 *Brazil Builds* exhibition at the Museum of Modern Art de Nova York, curated by Philip Goodwin.
2 Moment in which, according to Kenneth Frampton (1987), Le Corbusier breaks with the positive utopia of a ‘machine civilization’, gripped by a ‘grave anguish’ that is more pragmatic and closer to the reality of his historical present – the postwar period.
3 Among 1967’s artistic landmarks, we could mention Hélio Oiticica’s *Tropicália* installation at the New Brazilian Objectivity exhibition that opened in Rio in April; the film *Terra em Transe*, directed by Glauber Rocha, which opened in May; the song ‘Tropicália’, named after Oiticica’s work and composed by Caetano Veloso between August and September; the play *O Rei da Vela*, by Oswald de Andrade, staged by the Oficina group from September; the presentation of the songs ‘Alegria, Alegria’ e ‘Domingo no Parque’, by Veloso and Gilberto Gil, respectively, at the 3rd Festival of Brazilian Popular Music, in October; and the novel *Panamérica*, by José Agrippino de Paula, also published in that year. See Flora Süssekind in Carlos Basualdo (2005).
4 “It is evident that the European in the Americas never felt fixed to the continent. He had left behind the walled garden of the European landscape, and his new natural environment was larger, more hostile, and, above all, less confined than anything he had known until then. The American was, therefore, the first European to experiment the continuous flux of modern times, and his most characteristic literature, from Cooper and Melville to Whitman and Twain, celebrated images of shelterlessness, movement, and continuous flux.” Vincent Scully Jr., 2002: 31.

Image Captions

Fig. 1. Telmo Porto House, São Paulo, Vilanova Artigas (1968). Fundação Vilanova Artigas Collection.
Fig. 2. Whitechapel Experience, London (1969). Photo: John Goldblatt. Centro de Arte Hélio Oiticica Collection.
Fig. 3. Nuclei, Hélio Oiticica (1960), Rio de Janeiro. Centro de Arte Hélio Oiticica Collection.
Fig. 4. School of Architecture and Urbanism of São Paulo State University, Vilanova Artigas (1961). Photo: Guilherme Wisnik.

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A Radical Dual-ectics of Urban Formulation

Dashilar as a Heterotopic Partner to the Forbidden City

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Abstract

Dashilar is a neighborhood in Beijing that first came into being between the old Jin city and the relocated Yuan capital from the thirteenth-century urban reconstruction. While the Forbidden City defines both the physical and metaphysical axiality of Beijing, Dashilar as the embodiment of everyday practices has always been nurturing socio-spatial nuances that make Beijing a unique and adaptive construct. The co-extensive status of Dashilar with the Forbidden City, therefore, always reminds us that Beijing is a *space of becoming* – its formation is not as static as prescribed structures imposed by formal plans, but contingent upon the specificities and dynamics of everyday life.

This paper establishes *heterotopia* as a technical term that is capable of investigating the socio-spatial orders beyond prescribed structures, and gives an example of how this theorization of *heterotopia* can help us grasp the early twenty century Beijing as a *space of becoming* beyond the notion of "modernization."

The co-extensive status of Dashilar with the Forbidden City suggests a radical dual-ectics of urban formulation that transgresses any attempt to reduce everyday practice to the opposite of formal planning. This dual-ectics of urban formulation thus requires us to think about an alternative perspective for urban design and planning. Instead of submitting the complex order of everyday life to overarching structures, we urban designers and planners should enter the complexity of urban formulation and participate in its dynamics.

Keywords: urban design, heterotopia, historic cities, everyday life

1. Forbidden City and Dashilar as Two Ordering Systems: Beijing as a *space of becoming*

Beijing is a grand construction that emerged from the efforts of the early Ming emperors in the fifteenth century.[1] As the quintessence of Chinese capital-planning tradition, its layout provides a centric and symmetric model as an expression more of abstract metaphysical aspirations than of figurative or administrative ones, representing the imperial ideology that defines a central position in terms of the sovereign.[2] The rigidly symmetrical layout of the Forbidden City, comprising the emperor's palaces, defines the center of the city, and its north-south axis is the strongest organizing element of the entire layout. In the Forbidden City, the magnitude, detail, and arrangement of all spaces are echoes of such axiality and, therefore, of a metaphysical rather than human scale. Outside the Forbidden City, the walls of the Imperial City and Inner City are telescoping parts of the same apparatus, possessing a symmetry that regulates and subjects all in the Empire to the same axiality.

At the same time, Dashilar, a neighborhood sitting outside the Inner City on its southwestern margins, reminds us that the urban formation of Beijing cannot be simply reduced to this metaphysical diagram. Although it too is invested in the metaphysical diagram, Dashilar operates by a kind of inverse logic; it seems to have been generated with a lack of axiality but rather formulated through different strands of everyday practices. Dashilar had already come into being two centuries before the construction of Ming Beijing: dating from the thirteenth century, it developed on the eastern margins of the Jin city (Zhongdu, 1153–1215) and remained to be on the southwestern margins of the relocated Yuan capital (Khanbaliq or Dadu, 1271–1368) (Fig. 1). One of the evident traces of alternative forces of urban formation in Dashilar is the main road that runs west to east diagonally northwards through the limits of the neighborhood.[3] It leads from what could have been an exit gate to the east north wall of the Jin city, towards the south gate at the entrance of the Ming/Qing Inner City. It seems to suggest a recurrent incidental movement and series of transactions that grew between the old and new cities from the point of the thirteenth-century urban reconstruction. As the warren of streets emerged over time, only time itself seems to have been the predominant way of gaining sufficient understanding of its complexities to allow navigation.

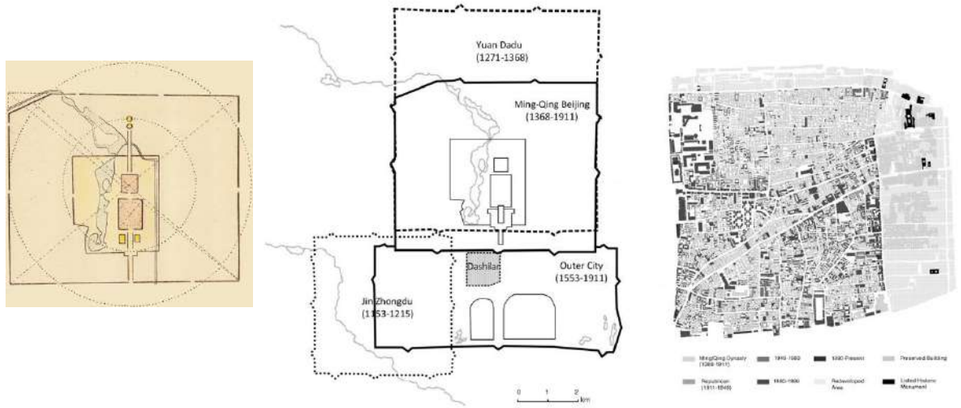


Fig. 1

Indeed, Dashilar and the Forbidden City sit as a pair, with Dashilar as the real to an ideal counterpart. Their relationship, however, is not simply that of the former opposing or conforming to the latter. Instead, they cooperate in each other's formation and exist in a symbiotic relationship. The planning of Ming Beijing redefined the territory of the city and established a new metaphysical diagram, based on a good appreciation of the markets and residential areas that had developed without any definite plan in Dashilar and other areas outside the southern gates of the Yuan capital.[4] Although the plan absorbed a part of these areas in the Inner City and then enclosed all the built-up areas on its southern margins to form the Outer City, it had never attempted to subject their irregular street patterns to its axiality.[5] As a

result, Dashilar was only disturbed but never governed by the external imperial spatial forces and has juxtaposed itself to the axial Forbidden City for centuries.

The proximity of Dashilar to the Forbidden City has made it also a part of the reality of Beijing. All that is subjected to ideologically based formalities in the Inner City exists in Dashilar as well but in a very different existential and expressive order. Taking Dashilar and the Forbidden City as a pair is critical for us to grasp the urban formation of Beijing. Implying two different ordering systems, such pairing reminds us that the spatial order of Beijing is not simply as static as prescribed structures imposed by formal plans but also contingent upon the specificities and dynamics of everyday life. In other words, their pairing allows us to view Beijing as a *space of becoming*.

2. The Pairing of Forbidden City and Dashilar: A theorization of *heterotopia*

2.1. Dashilar as a *heterotopia*

To inform Beijing as a *space of becoming*, the pairing of the Forbidden City and Dashilar cannot be oversimplified as being in a binary relation. Instead, "heterotopia" would be a useful term to comprehend the co-existent status of Dashilar with the Forbidden City.

The term "heterotopia" is first elaborated as "other places" by the French philosopher Michel Foucault.[6] Foucault is interested in the real places that are "in relation with all the other sites"[7] but are "absolutely different from all the sites that they reflect and speak about;"[8] by "suspecting, neutralizing, or inverting the set of relations that they happen to designate, mirror, or reflect,"[9] they allow us to see a larger construct of what is outside them. Following the template established by the notion of *utopia*, Foucault calls these places "heterotopias" – the prefix *hetero-* coming from the Ancient Greek *héteros*, meaning "other" or "different," combined with the Greek morpheme *tópos*, meaning "place."

Indeed, Dashilar shares the two properties of the Foucauldian heterotopia. Dashilar is an extraordinary case of everyday life as an organizing force in socio-spatial ordering because of its specific location. On the one hand, sitting outside the well-planned capitals, Dashilar was not codified by any hegemonic power. On the other hand, Dashilar's proximity to the main entrance of the Inner City made it a place to accommodate and serve a wide variety of residents and visitors. The diversity and mobility of people in Dashilar constantly nurtured heterogeneities in everyday life, which in turn gradually constituted remarkably complex socio-spatial orders. This special complexity of Dashilar makes it different from all other places; but more importantly, it informs the agencies that are vital for the formation of Beijing but are not a given and can never be stated *a priori*.

It is worth noting that Foucault used "heterotopia" as a device to explore political techniques through which hegemonic forces shape everyday practices. In his theorization, "heterotopias" were considered as static beings in the synchrony of hegemonic forces. Thus, Foucault draws a sharp distinction between "heterotopias" and all the other real space: as a special situation "outside of all places,"[10] a "heterotopia" resists conformity to the larger construct that it reveals. Such "outside" status stresses the normative role of the larger construct and, therefore, identifies the Foucauldian heterotopia as a form of "crisis" or "deviation."[11]

Dashilar as a *heterotopia,* however, does not have the status of being "outside." It conditioned the construction of the Inner City and was subsequently included as a part of the Outer City from 1553. Being a real place that sits alongside the Forbidden City, Dashilar has been creating collectively with the formal plans the city of Beijing. Here, Dashilar as a *heterotopia* is not to inform political techniques through which a dominant power shapes everyday practice. Instead, it takes a form of *construction* and reveals how everyday practices also gradually build up the city of Beijing as a larger construct.

This notion of *heterotopia* as driven by Dashilar has extended Michel Foucault's theorization by making the term part of *an ontology of becoming*. Foucault made it a principle that "each heterotopia has a precise and determined function within a society and the same heterotopia can, according to the synchrony of culture in which it occurs, have one function or another."[12] In this theorization, however, Beijing is in a process of becoming and striving to be what it is not yet, and Dashilar as a *heterotopia* has multiple functions, which are contingent upon how other spaces respond to its heterotopic characters.

2.2. Dashilar as a world of *heterotopias*

By suspending the tight codifications of normalizing systems but allowing the heterogeneities of everyday life to be incorporated into its fabric, Dashilar was able to develop its own *interiority* – dynamics of specific relationships between people and things as organizing forces. The architectures in Dashilar are a significant aspect and embodiment of its existential and expressive order. The notion of *heterotopia* as driven by Dashilar, besides helps us understand the co-existent status of Dashilar with the Forbidden City, also explicates the salient features of the architectures therein.

The buildings and their aggregation in Dashilar register historical mutation but are all arranged in a perplexing manner. The warren of streets provides no orthogonal circulation; buildings in various styles constructed in different milieus can be found juxtaposed to one another along the same street. What is constructed constantly nourishes entirely new urban entities, such as the celebrated playhouses that came of age during the eighteenth century, and a manual system of delivering tap water that emerged in the early twentieth century. Not only that; the architectural forms keep evolving, to present us with a great diversity of styles. For example, even the traditional Chinese drugstores that are often built with conforming interiors have created deviating shopfronts. Despite this diversity of architectural form, navigation in the densely occupied area is not a problem for the local people, because many of the buildings have been marked by the names and life stories of the celebrities who have dwelt there over time.

These architectures—as smaller assemblages of varying formalities—have two salient features. First, they are different from one another for being contingent upon specific entities and their relations. This is well illustrated by the deviating shopfronts created by the traditional drugstores which have been built on similar plans to best serve their shared business. Second, the architectures in Dashilar gradually mutate in sophisticated ways to accommodate heterogeneous others. For example, the shops in Dashilar have referenced the playhouses when navigating their specialties; the silk fabric shops have innovated in their business management and architectural production based on critical evaluations of *Ruifuxiang*'s shopfront in new contexts; the itinerant dwellers have maintained their otherness by incorporating the narratives of Li Yu's Mustard Seed Garden into their temporary residences.[13]

Such features allow the architectures in Dashilar to be theorized as *heterotopias*: the architectures are heterotopic spaces, formalizing their heterotopic characters by responding to the heterotopic characters of others. Specific characters of architecture would make intelligible certain heterotopic orders of other spaces, and the same architecture can embody simultaneously multiple *heterotopic relations* that are paradigmatic. Dashilar can thus be viewed as a world of *heterotopias*: the architecture nurtures and develops *heterotopias* as part of Dashilar's organizing impulse. Therefore, to grasp Dashilar, and also Beijing, as a construct of everyday practice, we need to keep looking into the many different assemblies of spaces as serial *heterotopias*.

3. Probing into the Complexity of Urban Formulation Through *Heterotopic Relations*

The pairing of the Forbidden City and Dashilar requires us to view Beijing as a *space of becoming*. It also allows us to establish *heterotopia* as a technical term that is capable of investigating the socio-spatial orders beyond the prescribed structures. In this section, I will give an example of how this theorization of *heterotopia* can help us grasp the early twenty century Beijing as a *space of becoming* that is beyond the notion of "modernization."

3.1. A paradox of "modernization"

Prominent historians Hou Renzhi and Yue Shengyang have drawn a map of the "modern architectures" in the western Outer City of Beijing.[14] According to their note, the "modern architectures" marked out on this map are those being overtly influenced by "western architecture, foreign cultures, advanced technologies and new materials"[15] in the 1900–30s. If taking a close look at this map, one can find that *Deshou tang* and some other smaller traditional Chinese drugstores were the only "modern" buildings related to healthcare. This seems to suggest that these drugstores were pioneers in healthcare modernization.

Surprisingly, on one of the other maps by Hou and Yue, however, these drugstores in a "modern" form were excluded from the modern healthcare system.[16] As explained in the note, this modern healthcare system included western-style hospitals, a few prominent drugstores of traditional Chinese medicine, modern pharmacies, and also *niudou ju* (cowpox vaccination bureaus), but excluded smaller drugstores, clinics, and itinerant doctors.[17] These two maps together present us with a paradox of "modernization"

in the early twenty century Beijing: the division of “modern” and “traditional” in medical practice did not correspond to the same division in the architectural production of healthcare facilities.

Indeed, there was a discrepancy between architectural style and medical practice in Beijing during the early twentieth century. On one side, those medical institutes that adopted more modern and western practices were often not given a modern or western architectural style because of the social background of the medical modernization in Beijing. When the western medical practitioners started their scientific practices in Beijing, they did not view western medicine as something alien to China’s best ideals and aspirations, but as “an organism which would become part of a developing Chinese civilization.”[18] Therefore, they made efforts to establish connections with Chinese society and were not eager to give their hospitals or pharmacies an overtly western appearance.

The most prestigious example was the Peking Union Medical College, an American-style medicine school and hospital built by the Rockefeller Foundation in 1921.[19] To highlight the modern institution’s political significance and cultural superiority in a way that Chinese people could well appreciate, it raised Chinese roofs in the same style as that of the Forbidden City (Fig. 2).[20] Similarly, the modern pharmacies in Dashilar did not build foreign shopfronts to distinguish themselves from the traditional drugstores, although their interiors were equipped in a thoroughly modern way. In the photos from the 1930s, the modern pharmacies on Dashilar’s Commercial Street all had their traditional narrow flags hung over the street alongside the many flags of all manner of shops (Fig. 2).

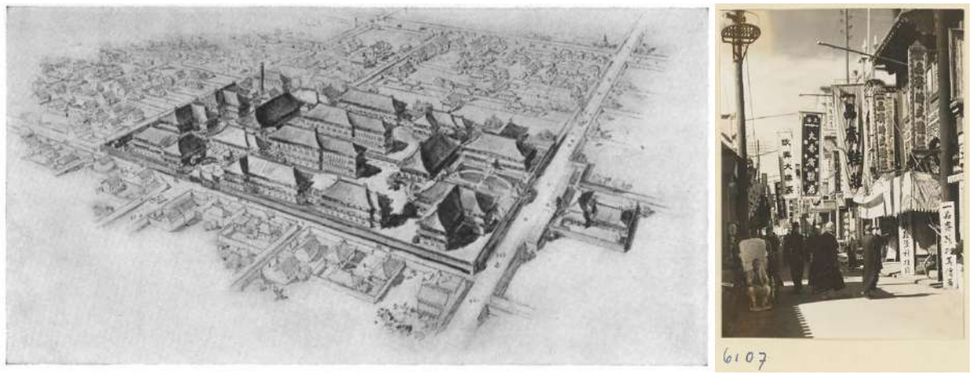


Fig. 2

On the other side, some traditional drugstores adopted westernized architectural styles that would surprise anyone in Beijing at that time. *Deshou tang* on the southern edge of Dashilar was a prominent example. As a traditional Chinese drugstore, *Deshou tang* followed the traditional pattern in its interior but overtly referred to the West in its shopfront. It was a two-storey construction which featured brick walls instead of the traditional timber framework; on top, the roof parapet was raised in the center to fit a round clock and hide the dome behind it; from the hole on either side of the parapet, a steam-train model even came forward, blowing the whistle every hour on the hour during the daytime (Fig. 3)! Although the two-storey structure, the round clock, the dome, and the stream-train model were overtly foreign, why and how they were combined in the shopfront is rather perplexing and the notion of “modernization” helps little in grasping the rationales behind this architectural innovation.

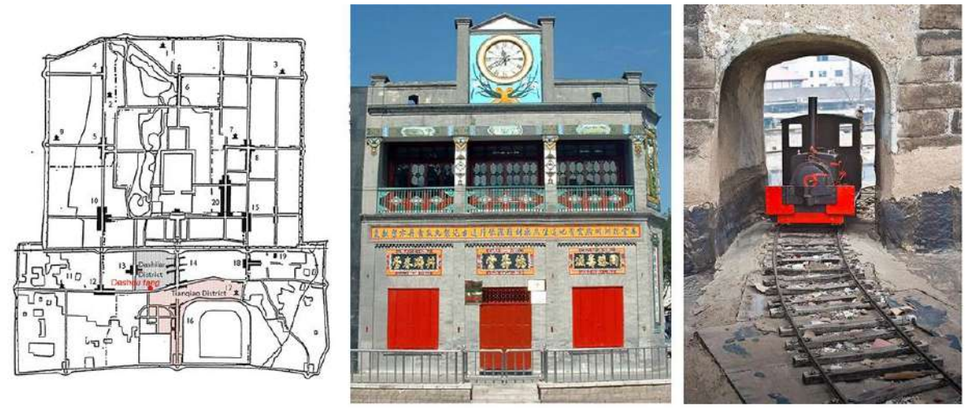


Fig. 3

The notion of “modernization” misses the complexity of *Deshou tang*’s architectural innovation by reducing it to what it is different from. Instead, by tracing the process through which *Deshou tang*’s shopfront was invented and became influential, we can see how the heterotopic logics of other spaces participated in the formation of *Deshou tang* as a *heterotopia*.

3.2. Architecture registers the *heterotopic relations*

The architectural form of *Deshou tang*’s store on the southern edge of Dashilar registers the heterotopic logics that acted as organizing impulses in forming its special complexity. First of all, its interior arrangement informs that the medical practice of *Deshou tang* followed strictly the shared tradition of Chinese drugstores and was not influenced at all by foreign culture or medical modernization.

Given the shared tradition and practice, most traditional drugstores in Beijing seemed to have been built on the same plan, consisting of a shop in the front, a courtyard with storage rooms in the center, and a mill with a separate entry in the back, which served their shared business best. The shop in front featured a high counter that was U-shaped, with the left side for ready-made drugs, the right side for prescribed medicines, and the middle for settling accounts.[21] As an independent section, the mill in the back included rooms for different procedures, but also sleeping quarters for the apprentices and assistants. Because the access to the space between the shop in front and the mill in the back was usually restricted, it was used to preserve prescriptions and formulae, and to store all kinds of raw ingredients and ready-made medicines.

As governmental dispensaries witnessed a steady decline from the early Ming (1368–1644) and were finally abandoned by the Qing courts in the mid-seventeenth century, the growing objective of profit-making imposed on drugstores an increasing need to distinguish themselves from each other.[22] As a result, while the interiors of drugstores remained similar, the central courtyards became essential for the proprietors to navigate and reserve the heterotopic characters of their businesses

The interior arrangement of *Deshou tang* followed exactly this traditional pattern (Fig. 4). Although its storefront building had two storeys, the shop only occupied the ground floor and appeared to be nothing special—one would find a U-shaped serving counter behind which were endless rows of small drawers containing all manner of raw ingredients and, above them, a few rows of blue porcelain jars with brass tops for the storage of ready-made pills. The upper floor was directly on top of the shop, but the stairs that led towards it were located behind the shop in the central courtyard. It thus served as part of the private space where the proprietor made the rules.

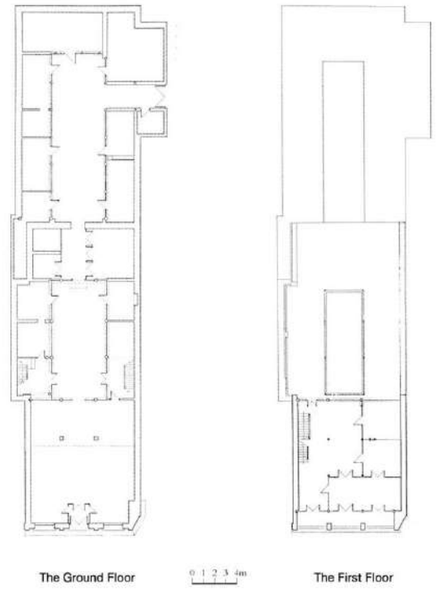


Fig. 4

Second, the shopfront of *Deshou tang* registers the proprietor's innovations in management. Unlike other proprietors, Kang Boqing, the founder of *Deshou tang*, did not have a family tradition in medicine. Born in a poor family in the rural area outside Beijing, Kang had apprenticed at a traditional drugstore in the Inner City where he first learned to make medicines and accessed medical texts. He acted as an assistant in the same drugstore after his apprenticeship was over but decided to start his own medicine-making business a few years later.[23] At that time, it was unusual for one with such a background to open a drugstore, because drugstores generally supplied well-off urban families and extensive knowledge of medicine was required to gain recognition by these customers. Therefore, drug sellers with a similar background to Kang's would usually buy a few kinds of popular medicine from established drugstores and fit them out on a stall at fairs in different quarters of the city throughout the year.[24]

Kang believed, however, that his knowledge and experience could allow him to produce medicine of acceptable or even good quality at a much lower price. He thus turned his home into a small medical mill and tried to sell his home-made pills by peddling them among the inns in the Outer City. Although the quality of his preparations was comparable to those made by established drugstores, the sales were hampered by their anonymity. Recognizing this, Kang re-oriented his business by wholesaling his pills to small traders who were active in the rural areas, which earned him sufficient capital to open his first drugstore just outside the Chongwen Gate in 1920. Although his medicines began to be sold directly to the customers in the store, the wholesale department remained his primary business.

In the 1920s–30s, the populace of lower socioeconomic status in Beijing usually went to Tianqiao, a newly emerged market featuring cheap and second-hand goods, to buy their daily necessities, including medicines. The emergence of Tianqiao was attributed to the process of constructing a new Republican Beijing: cleaning up the Inner City, opening the Temple of Heaven as a public park, building new roads and railways, and designating Tianqiao as the terminal of the new trolley lines.[25] Because all that was not wanted within the Republican ideology was displaced to Tianqiao, it became a place for selling second-hand goods and personalized bodily skills. While the material goods stimulated everyone's suspicions, the bodily performances enjoyed a reputation for true mastery.[26]

The reliability of the medicines sold at Tianqiao was commonly doubted by customers. To overcome this doubt, the sellers often relied on the credibility provided by their physical skills, as they could not present any other valid evidence for the effectiveness of their medicines. The most trusted sellers were the apothecaries who could perform impressive martial arts and wrestling for their potential customers.

For example, Niu Maosheng was a famous apothecary who always attracted a big audience by pulling an extremely hard string of a big bow with his teeth to demonstrate the credibility of his muscle-building pills (Fig. 5).[27]



Fig. 5

To make his medicines known to his target customers, Kang made a great effort to advertise at Tianqiao. Rather than performing martial arts or wrestling shows for his potential customers, Kang sponsored the best performers at Tianqiao by giving them free backdrops – on which was inscribed the name of his most characteristic pill – to decorate their shed theatres.[28] Although its credibility could not be evidenced by the backdrops, *Deshou tang*'s best specialty became widely known at Tianqiao. This subsequently allowed Kang to open a southern branch along the east-west main street that divided the districts of Dashilar and Tianqiao in the early 1930s.

To attract potential customers from Tianqiao, this new store of *Deshou tang* was designed to be recognized from a distance. Its two-storey construction was higher than most of the buildings along the same street. Instead of hanging drugstore signs beside the entrance doorway, it turned the signs into a tactile relief pattern to decorate the brick pillars of the balcony on the upper floor. Understanding that an eye-catching performance usually conditioned the exchange of medicine at Tianqiao, Kang set up a "stage" on the top of the storefront building. A steam-train model, on which the name of *Deshou tang*'s most characteristic pill was inscribed, ran onto the "stage" through a hole on the parapet and across to another hole on the other side, whistling as it went. The dome, which functioned as a "green room" for the train to rest in between shows, was concealed by the raised parapet decorated with a round clock that served as the "backdrop" to this hourly "performance." This function determined that the dome, despite its utterly exotic form, was designed as being hardly noticed from the street.

Finally, the constant negotiation between the proprietor and his customers gradually formed the codification of *Deshou tang*'s shopfront. Through such a distinctive shopfront, *Deshou tang* succeeded in attracting the attention of people from a distance, and the hourly "performance" always drew a big audience, as the most famous apothecaries did at Tianqiao. This "performance," however, was different from the shows concocted at Tianqiao, because it did not aim at testifying to the effectiveness of *Deshou tang*'s medicines. Like the prominent Chinese drugstores, *Deshou tang* established the reliability of its medicines on the learned traditions of mainstream medicine and the buyers' personal experience.

At the same time, the crowd was also very cautious when watching *Deshou tang*'s "performance." The experience of shopping at Tianqiao had developed their ability to judge. When watching the "performance," they were also motivated to compare *Deshou tang* with other medicine dealers. Although not fully convinced, the crowd would be drawn by the more affordable prices than those of other big drugstores and the less anonymous origins than those of the apothecaries at Tianqiao. Those who finally decided to give the product a try would find Kang's medicines effective and worthy of what they had paid. In this way, the special composition of *Deshou tang*, especially the "modern" elements, began to be codified as a representation of its merit.

In conclusion, *Deshou tang*'s architecture is not, as historians have indicated, simply a common arrangement that catered to the same occidental fashion in the early twentieth century. Instead, its special composition registers the shared tradition of Chinese drugstores, the heterotopic characters of the proprietor's management, the rationales behind the trading of medicines at Tianqiao, and customers' ever-changing understanding of the store's merit. Through its architecture, we can grasp *Deshou tang* as a *heterotopia,* the formation of which responded to the heterotopic orders of many co-extensive practices in Beijing.

4. A Radical Dual-ectics of Urban Formulation

The pairing of the Forbidden City and Dashilar reveals Beijing as a *space of becoming*. While the Forbidden City has defined the axiality of Beijing, Dashilar as the embodiment of everyday practices has always been nurturing many socio-spatial nuances that make Beijing a unique and adaptive construct. In this sense, the Forbidden City and Dashilar are co-extensive with each other in the same real-ideal correspondence. The theorization of *heterotopia* based on their pairing, therefore, does not stress the normative role of the Forbidden City but the constitutive role of Dashilar in forming Beijing as a larger ordering system.

The complexity of urban formulation is usually ignored in favor of a more normalized approach to order – that is, a tendency towards regulation under typological planning regimes and heritage programs. However, the co-extensive status of Dashilar with the Forbidden City suggests a radical dual-ectics of urban formulation that transgresses any attempt to reduce everyday practice to the opposite of formal planning. In other words, such urban formulation is not simply dominated by formal plans but also contingent upon the specificities and dynamics of everyday practices. Instead of submitting the complex order of everyday life to overarching structures, we urban designers and planners should enter the complexity of urban formulation and participate in its dynamics. This requires us to think about an alternative perspective for urban design and planning.

First of all, we need to reconsider the role of urban design and planning. The objective of urban design and planning ought not to regulate the divergent operations according to a singular ideal, but rather to record the existing agencies based on a critical evaluation of the contingent fabrics in a newly interpreted situation. As the arrangements created by the practices of urban design/planning become part of the constructed fabric, they would stimulate mutations in everyday practices and allow new agencies to emerge. In this way, such arrangements would gradually come to terms with the multiple complex assemblages of difference and develop varied means of encouraging rich assemblages between people and things. In this sense, urban design/planning is at the same time a process and means, an assemblage of heterogeneous apparatuses.

To create such an arrangement, we need to establish sufficient knowledge of the existing fabrics. This requires us to keep looking for everyday *things*—tangible and intangible formalities—that have taken on the constitutive roles in the formation of nuanced socio-spatial fabrics. By archiving a place through the ontologies of many everyday *things* to be found therein, we would be able to engage with various *actors* and participate intimately in their ways of communicating with each other. This archive, therefore, serves as an important database of urban practice. Not only does it illustrate the approach of seeking to interweave existing socio-spatial fabrics, it also reveals the salient entities in the existing socio-spatial fabrics that are to be remeasured and reinstituted as new assemblages with the same dynamism as such a heterotopic context.

By bringing certain entities, and the heterogeneous agencies that they embody, into an arrangement, we can create a space connected with multiple strands of everyday practices. Such an arrangement may lead to the development of mixed-use spaces. It is noteworthy that this arrangement is different from the conventional approach of hybridity and mixed uses adopted by culture-led urban regeneration—for example, the Temple Bar project in Dublin. Instead of proposing a specific form of mix and applying the principle of cross-subsidy to maintain such mix[29], the arrangement here simply allows the existing agencies to work out complex orders on their own terms.

Besides advocating for urban design as a process of recording existing agencies, this dual-ectics of urban formulation also suggests innovations in planning policy. For example, the conventional procedure usually starts with master planning, then zoning, and finally architectural design. However, this procedure is not appropriate to Dashilar and other urban quarters of similarly complex orders, because the scheme for the whole area can only be proposed based on the assemblages of parts. Therefore, new policies are to be made to allow the process of planning to start with individual architectural designs as a way of exploring different-scale speculations of varying *agencies-of-production*.

Notes

1 The massive construction project started in 1403 when the city was named “Beijing,” the “Northern Capital.” The city formally assumed the status and the functioning of a capital in 1420 under the reign of Emperor Yongle, and was then declared the permanent capital by Emperor Zhengtong in 1441. Significant construction work continued during this period. About a century later, three new sub-urban altars were added to the plan in 1530 and a city wall was built to encircle the southern outskirts of Beijing in 1553. Zhu Jianfei, *Chinese Spatial Strategies: Imperial Beijing, 1420–1911* (London: Routledge, 2004), 28–29. Hou Renzhi, *An Historical Geography of Peiping* (Heidelberg: Springer, 2014), 95–105.

2 The long-practiced Chinese capital-planning tradition is based on a classical cosmology and a symbolic layout outlined in *Zhou li* (The rites of Zhou dynasty), a tradition that has been discussed by scholars of Chinese planning history. For example He Yeju, *Kaogongji yingguo zhidu yanjiu* [A study of the planning system of the *Kaogongji*] (Beijing: Zhongguo jianzhu gongye chubanshe, 1985); Arthur F. Wright, “The Cosmology of the Chinese City,” in *The City in Late Imperial China*, ed. G. William Skinner (Stanford: Stanford University Press, 1977), 33–73. Zhu Jianfei has explained in detail the imperial ideology that dominated the planning of Beijing. Zhu, *Chinese Spatial Strategies*, 32–44.

3 Hou Renzhi has pointed out that “the only striking feature in the Outer City” is this main road in Dashilar. He reminds us that the irregular pattern of the Outer City is deeply rooted in how the city has evolved, and he questions the generic understanding of Griffith Taylor. However, Hou’s historical reconstruction has foregrounded how the political power of different milieus negotiated with the geographical conditions in the formation of their capitals. If his analytical approach is regarded as scientifically correct and accurate, we can easily overlook the uncategorized features of the Outer City. See Hou, *An Historical Geography of Peiping,* 87; Griffith Taylor, “Environment, Village and City,” *Annals of the Association of American Geographers* 32, no.1 (1946): 21; *Our Evolving Civilization* (Toronto: University of Toronto Press, 1946), 207–209; *Urban Geography* (London: Methuen & Co. Ltd., 1949), 26–29.

4 When the Ming forces sacked the Yuan capital in 1368, the Ming general, to strengthen his defenses, immediately reduced the size of the city by moving the northern wall about two miles to the south, because the northern part of the city had never been properly occupied. When the Ming ruler later intended to redevelop the city as a capital, the southward shift of the old northern wall had rendered the old metaphysical diagram no longer accurate. When re-establishing the metaphysical diagram, the new plan extended the southern city wall about half a mile, not only for a longer approach to the Forbidden City on an axial way but also for the vitality of the built-up areas formerly outside the old southern wall. Zhu, *Chinese Spatial Strategies*, 28. Hou, *An Historical Geography of Peiping*, 80–86, 96–97, 99.

5 The juxtaposition of the axial and irregular patterns is clearly illustrated in various maps of the city. Some examples are maps found in *Baqi tongzhi chuji* [Initial Collection of Comprehensive History of the Eight Banners], compiled by E Ertai (Imperial publication, 1738); *Plan de la ville tartare de Peking* [Map of the Inner City of Beijing] (1765); *Qianlong jingcheng quantu* [Atlas of the Capital in the Qianlong Period] (1750) and *Shoushan Quantu* [Map of the Capital] (Jiaqing Period, 1796-1820), in *Beijing guditu ji* [Beijing in Historical Maps], ed. National Library of China (Beijing: Cehui chubanshe, 2010).

6 Michel Foucault, “Of Other Spaces,” trans. Jay Miskowiec, *Diacritics* 16, no. 1 (1986): 22–27.

7 Ibid., 24.

8 Ibid., 24.

9 Ibid., 24.

10 Ibid., 24.

11 Ibid., 24–25.

12 Ibid., 25.

13 Peng Xue, “Navigating *Heterotopias* and *Things*: Dashilar as Co-extensive Urban Paradigms” (PhD diss., University of Edinburgh, 2020).

14 Hou Renzhi and Yue Shengyang, eds., *Beijing Xuannan lishi ditu ji* (Beijing: Xueyuan chubanshe, 2008), 98–99.

15 Ibid., 97.

16 Ibid., 94–95.

17 Ibid., 94.

18 Rockefeller Foundation, *Annual Report*, 1917, 224.

19 After spending six years and over eight million dollars, the Rockefeller Foundation and its China Medical Board finally established the Peking Union Medical College (PUMC) in 1921. As the center of the Foundation’s philanthropic work in Asia, PUMC was a quintessentially American institution that had a “civilizing mission” to the backward land. Aiming at excellence, PUMC recruited a faculty of internationally recognized caliber and was equipped with advanced biomedical facilities. Mary Brown Bullock, *An American Transplant: The Rockefeller Foundation and Peking Union Medical College* (Berkeley: University of California Press, 1980). Mary E. Ferguson, *China Medical Board and Peking Union Medical College: A Chronicle of Fruitful Collaboration 1914–1951* (New York: China Medical Board of New York, Inc., 1970).

20 According to the memoir of Harry Hussey, the architect who was in charge of the design of PUMC, the exteriors of the PUMC complex did resemble as closely as possible the model of imperial palaces. To achieve proper shapes and proportions in terms of the roofs, Hussey heavily consulted with Zhu Qiqian (1871–1964), the Minister of the Interior but also an architect who had taken charge of several important architectural projects in Beijing. Harry Hussey, *My Pleasure and Palaces: An Informal Memoir of Forty Years in Modern China* (New York: Doubleday and Company, 1968), 229. When the construction of PUMC was accomplished in 1921, the visual effect of the curved roofs turned out to be the most striking part of its physical realization to the group led by John D. Rockefeller, Jr., who had traveled from the US to Beijing for the dedication. Looking from the Grand Hotel de Pekin, a view which impressed Dr. William Henry Welch, the green-tiled roofs of PUMC paralleled the hundreds of curved roofs with their golden glow where the once Forbidden City was located. For the Westerners who particularly enjoyed this panoramic view, it was a powerful image conveying the message that PUMC was redefining the parameters of China’s best medical practice. William Welch, *William Welch Papers* (WWP), 47. The original text is cited by Bullock, *An American Transplant*, 7.

21 John Cameron, “Some Sidelights on Pharmacy in Peking, China,” *American Journal of Pharmacy* 97, no. 10 (1925): 665. Sherman Cochran, *China Medicine Men: Consumer Culture in China and Southeast Asia* (Cambridge: Harvard University Press, 2006), 30.

22 Angela Ki Che Leung, “The Yuan and Ming Periods,” in *Chinese Medicine and Healing: An Illustrated History*, ed. T.J. Hinrichs and Linda L. Barnes (Cambridge: Harvard University Press, 2013), 147–148.

23 Zhang Jianming and Qi Dazhi, *Huashuo Jingshang* [Stories of Beijing’s Entrepreneurs] (Beijing: China Industry & Commerce Associated Press, 2006), 242–243; Wen De, “‘Yuanzhi yuanwei’ lao yaopu” [Authentic Old Pharmacy], *Shoudu yiyao* [Capital

24 John Cameron, “Some Sidelights on Pharmacy in Peking, China,” 665–671.

25 Madeleine Yue Dong, “Recycling: The Tianqiao District,” in *Republican Beijing: The City and Its Histories*, ed. Reginald E. Zelnik (Berkeley: University of California Press, 2003), 178–183.

26 Ibid., 183–188. 27 Ibid., 189–190.

28 Hou Baolin, *Hou Baolin* zizhuan [Autobiography of Hou Baolin] (Ha’erbin: Heilongjiang People’s Publishing House, 1982), 29; Wang Zhong and Chen Faxiang, *Zhongwai guanggao shi* [History of Chinese and Foreign Advertisement] (Changsha: Hunan University Press, 2007), 153; Xu Junji, *Zhongguo guanggao shi* [History of Chinese Advertisement] (Beijing: Communication University of China Press, 2006), 168.

29 John McCarthy, “Dublin’s Temple Bar: A Case Study of Culture-led Regeneration,” *European Planning Studies*, Volume 6, Issue 3 (1998): 271–281.

Image Captions

Fig. 1. Left. Plan of the Inner City of Ming Beijing, in Hou Renzhi, *An Historical Geography of Peiping* (Heidelberg: Springer, 2014), Fig. 8.3. Middle. Dashilar developed on the margins of the old capitals. Right. The spatial fabric of Dashilar developed over time, adapted from Beijing Municipal City Planning Commission, Conservation Planning of Dashilar Area, 2002.

Fig. 2. Left. Peking Union Medical College, Perspective by Harry Hussey, Rockefeller Foundation, China Medical Board, *Third Annual Report (January 1, 1917–December 31, 1917)* (New York: Offices of the Board, 1916), 9, accessed November 19, 2019, https://babel.hathitrust.org/cgi/pt?id=uc1.b4276705&view=1up&seq=61. Right. The narrow flag of the Occidental Grand Pharmacy, Hedda Morrison, *Street Scene with Shop Signs for Shoe Shops (center)*, ca.1933–1946, Harvard-Yenching Library of the Harvard College Library, Harvard University, accessed April 22, 2019, https://iiif.lib.harvard.edu/manifests/view/ids:16259$1i.

Fig. 3. Left. *Deshou tang* in the market system of Republican Beijing, adapted from Madeleine Yue Dong, *Republican Beijing: The City and Its Histories*, ed. Reginald E. Zelnik (Berkeley: University of California Press, 2003), 149, Fig. 18. Middle. The shop front of *Deshou tang*’s store at Dashilar, by China National Radio, in “Deshou tang: yiyao pinpai zaichuang huiguang” *CNR.CN*, last modified April 21, 2008, http://www.cnr.cn/2008tf/xwwhz/lzh/200804/t20080421_504768222.html. Right. The restored steam-train model running off the “stage.” Photograph by Wang Tian, *Time Out*, accessed April 24, 2019, http://www.timeoutcn.com/features/75384.html.

Fig. 4. The architectural plans of *Deshou tang*, in Wang Shiren, ed., *Zengding xuannan hongxue tuzhi* (Beijing: China Architecture & Building Press, 2015), vol. 2, 1120.

Fig. 5. An apothecary performed at Tianqiao, Hedda Morrison, *Patent Medicine Seller of Body-building Ointments Flexing a Bow with His Teeth in Front of a Crowd at Tianqiao Market*, ca.1933–1946, Harvard-Yenching Library, accessed April 29, 2019, https://iiif.lib.harvard.edu/manifests/view/ids:9322$1i

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Urbanization processes and typologies:
urban overlays for the 21st-century

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Abstract

The rapid and diverse forms of urbanization of the last decades can be used to question the bases of urban theory. Therefore, interrelationships between geography and architecture are important to understand urban processes and urban types in the 21st century. Thus, we aim to establish dialogues between the understanding of emerging urban processes and the concept of typology.

Methodologically, we seek to deepen discussions based on the fundamental thesis of extended urbanization by Henri Lefebvre, reviewed by Neil Brenner for conceptual and methodological models on the planetary urban condition of the 21st-century, and by the concept of typology, from Alexander Cuthbert, and its importance to recognize urban forms in contemporary times.

According to Lefebvre, the study of urban forms must be replaced by the investigation of urbanization processes at all spatial scales. In Brenner's studies, interest in settlement typologies begins to be replaced by analyses of socio-spatial processes through which the varied landscapes of capitalism are produced. The methodological search for typologies was target of the main aspects of 20th-century urban theory, but for Brenner and Schmid, such typologies of urban settlements have already surpassed their usefulness. For Cuthbert, the examination of historical typologies contributes to the understanding of current urban processes. However, it is essential to recognize that urban configurations should be seen not only as types of settlements, but also as force fields for socio-spatial relations - as they are currently happening in ephemeral urban landscapes that comprise oil fields, military bases, and refugee camps.

Finally, the ideas of Cuthbert and Brenner converge to a common point: the first analyzes urban types, and the second defends a reading of the urbanization processes, but the overlap of the two points of view is important to understand urban spatial evolution in the third millennium.

Key words: urban theory, extended urbanization, urban processes, typology.

1. Introduction

The rapid and diverse forms of urbanization of the last decades - such as the examples of the Pearl River Delta in China - can be used to review the bases of urban theory, especially consolidated concepts of city and the urban/rural binary. In addition to the spatial and demographic expansion of megacities, we also observed socio-spatial transformations with new urbanization scales through polynuclear metropolitan regions. These transformations extend beyond a single metropolitan area and cross national borders, such as the Pearl River Delta itself; the Blue Banana, which includes the main urbanized regions of Western Europe; Lagos, Nigeria, a city centered on a coastal agglomeration in West Africa; among other emerging mega-urban regions in Latin America and South Asia. At the same time that these phenomena emerge and must be analyzed, the examination of historical typologies should also be considered because, according to Alexander Cuthbert [1], it contributes to the understanding of current urban processes that unfold in new types of settlements - force fields of socio-economic relations - as the ephemeral urban landscapes that comprise mining camps, oil fields, military bases in conflict areas, refugee settlements, emerging cities resulting from trade or services, temporary structures for sporting events and religious celebrations.

Given this scenario, we aim to establish dialogues between the understanding of emerging urban processes and the idea of typology. The subject is relevant because while the analysis of urban processes indicates the need for new theoretical understandings, the study of urban typologies works as an instrument that corrects mistakes in the classification of concepts; organizes knowledge by defining parameters; facilitates theorizing by delimiting distinct parts [2]. Considering the dialogue between urban processes and typologies is also important to discuss issues relevant to contemporary architecture and urbanism, such as the (re)definition of urban, transformations in land use and occupation, infrastructure and environment, and new vocabularies to name such emergencies.

Methodologically, we seek to deepen the discussions from the fundamental thesis of extended urbanization by Henri Lefebvre, reviewed by Neil Brenner for conceptual and methodological models on the planetary urban condition of the 21st century, and by the concept of typology, from Alexander Cuthbert, and its importance for recognizing urban forms in contemporary times.

Many of the analyses in architecture, landscape, and urbanism are developed through sociology, geography, and economy. Based on this, the dialogue proposed in this paper is essential to guide how architectural practices can act more actively in the face of these processes that shape contemporary urban realities. Especially in the so-called "global south" where criticisms of urban theory emerge showing a gap between “first world” cities (the global cities, models and generators of theory) and the "third world" cities (that coincide with the megacities and informality, marking the production of space in the 21st century as a mode of capitalist production[3].

These cities' experiences show that urban sprawl "beyond cities" participates in the construction of entire nations. The urbanization of peripheral areas and the surrounding rural environments leads to urban life forms, often without the implementation of urban structures. The urban-type is dispersed, giving way to dubious zones "suburban", "interurban", "exurban" where the traditional concept of the city is lost[4]. In place of its compact form that represented a historical process in formation for years, there is now a metropolitan population distributed and organized in regional areas in constant expansion, and that sometimes present the simultaneity of the agrarian, industrial and urban era[5]. According to Henri Lefebvre, these regions have dissolved their old agrarian structures resulting in the migration of homeless workers to the cities to find work[6]. For Milton Santos, this urban dispersion is marked by the artificial landscape, which is transformed by man and overlaps the natural landscape that practically no longer exists. When it exists, it is the target of political and economic intentions and changes with each historical period according to modes of social production[7].

2. Urban process

Transnational megacities and the idea of extraterritorial are other examples of changes in the recent urban context. The extended metropolitan configurations of Southeast Asia gather cities, countryside, and spaces of accumulation and transnational development - the free trade zones of the Pearl River Delta influence the physical limits of the delta, towards a larger scale. The understanding of extraterritorial spaces can be illustrated by the United States' military bases that advance with American cities in territories of other countries, such as Okinawa, where American infrastructure and laws extend on Japanese land.

Henri Lefebvre suggested that the outlines of a complete urbanization formation began to appear in Western Europe in the 1960s. The movement would have started with the fragmentation of traditional European cities; followed by the formation of a large-scale megalopolis encompassing England, Paris, the Ruhr region and Scandinavia[8]. Besides, logistics, trade, and tourism infrastructures were extended to remote areas. Industrial developments and housing developments were built in previously peripheral locations in France, Spain, and Italy; which led to the dissipation of agrarian communities resulting in processes of environmental degradation on a continental scale amid the process of "complete urbanization of society"[9]. This idea of a global scale was manifested in the architectural discipline from the mid-19th century until the 1970s through experimental planetary proposals such as

Spatial City and *Seven bridges to link four continents* by Yona Friedman. The first idealized to consolidate the land as a single structure, and the second united the continents into an individual mass. In the 21st century, experimental projects for regional scales rarely consider theories about emerging urbanization processes or new urban types.

Neil Brenner reviews the notion of extended urbanization developed by Lefebvre for conceptual and methodological models on the planetary urban condition of the 21st century. Brenner argues that the geographies of urbanization can no longer be conceptualized exclusively regarding cities, metropolitan regions, or even megalopolises. However, today they encompass diverse patterns and paths through the planetary socio-spatial landscape, from Manhattan to Matterhorn, from the Pearl River Delta to Mount Everest, from the Nile Valley to the Pacific Ocean[10].

The works coordinated by Brenner show that the structures inherited from urban knowledge must be reinvented to guide emerging forms of urbanization in the 21st century. Unlike the traditional urban/suburban/rural definition, the researchers argue that the urban today represents a common condition in which all political-economic and socio-environmental relations are entangled, regardless of location or the morphological configuration. This "extended urbanization" means that even spaces outside the agglomeration centers (worldwide maritime routes, transport networks, communication infrastructures, resource extraction sites, alpine and coastal tourist enclaves, industrial catchment areas, oceans, deserts, mountain ranges, forests, and even the atmosphere) are becoming part of a world scenario of capitalist urbanization processes with the uneven extent of an urban fabric composed of different patterns of investment and land use. Urbanization is manifested in the expansion of cities, city-regions, and mega-city-regions and, above all, it causes socio-spatial transformations in settlements that are less densely agglomerated, but that are increasingly interconnected with urban centers.

Brenner and Schmid differentiate the concepts of concentrated urbanization (population agglomeration, capital investment and infrastructure in large sets of settlement spaces) and extended urbanization (operational landscapes that support agglomeration, such as an industrial, mineral or oil exploration zone and that advance to the subsoils, oceans, and atmosphere being integrated to the urban fabric)[11] analyzing the capitalist urban-industrial fabric with sociological, cartographic, and political perspectives on the contemporary urban global condition. The global system of agglomerations does not occupy more than 5% of the planetary terrain. However, it is responsible for structuring the 70% of the terrestrial surface currently used, in such a way that the operational landscapes suffer destructive environmental and social consequences when supporting the growth of cities[12].

Therefore, if the urban condition becomes global through the emergence of qualitatively new and planetary forms of urbanization, in which the urban fabric is densely developed in the socio-spatial and political-economic fields, this global urbanization is not just an increase in the population of the city or an extension of its borders. It also means the reconfiguration of the urban itself and, especially, of thoughts inherent to it, such as city/suburb; nucleus/periphery; city/nature[13]. There is nowadays a demand to decipher the diverse articulations between the spatial, political, and environmental elements of this emerging planetary urban configuration.

Given this, attention to urbanization processes can clarify modes of urban agglomeration and, above all, the continuous production and transformation of this fabric, eliminating the classifications inherited from the countryside, such as rural, interior, and nature. From this perspective, Brenner and Schmid, with origins in the areas of geography, sociology, and philosophy, suggest that the notion of an urban era is a mistaken idea, as it divides something that cannot be divided[14]. The thesis of the urban era considers urban and rural areas distinct, disregarding generalized urbanization processes based, above all, on demographic and administrative criteria to define residual areas beyond cities as rural areas. Such classifications do not clarify common characteristics that such regions could share in terms of population, density, land use, and labor markets. Two examples, among so many possible ones, illustrate this reality: Shenzhen has rice fields in the city amid densely built areas, forming a hybrid urban landscape; in the European Union, the main criterion for urban/rural definition is population density[15].

The current model that establishes the urban/rural binary continues without defining a series of situations that do not fit into either category, even with alternatives proposed decades ago, such as the concept of the rural-urban continuum of the 1930s. This idea did not define a division between the models of urban and rural life but considered that the settlements exist in both environments, ranging from a very rural to highly urban scale with spaces that intertwine and overlap[16]. In this sense, more than preconceived models, it is important to understand urbanization as a dynamic process of continuous socio-spatial transformation with various types of settlements and morphologies configured on a greater or lesser scale. According to Lefebvre, the study of urban forms must be replaced by the investigation of urbanization processes at all spatial scales[17].

In the works developed by Brenner, the interest in settlement typologies begins to be replaced by the analysis of socio-spatial processes through which the varied landscapes of capitalism are produced. The methodological search for typologies was the target of several urban theories of the 20th century.

However, it is no longer convenient for urban planners to differentiate urban as a type of settlement (being city, metropolis or megalopolis) and other spaces (suburban, rural, nature) as non-urban, according to Brenner and Schmid[18]. For the same authors, such typologies of urban settlements have already surpassed their usefulness, a point from which we diverge, as we understand, according to Cuthbert[19], that the examination of historical typologies contributes to the understanding of current urban processes. However, we recognize that urban configurations must be seen as types of settlements but also as fields of force for socio-spatial relations - as they currently happen in ephemeral urban landscapes.

3. Typology

In addition to the importance of recognizing urban processes, as already mentioned, in the sequence, we will approach typology as a counterpoint to the previous topic - an instrument that, in addition to recognizing emerging urban forms, has, according to Oren Yiftachel[20], three primary functions: it corrects errors by classifying related concepts; organizes knowledge by defining parameters of a given subject; it facilitates theorizing by delimiting distinct subparts and focuses for other research. To this end, we will focus the debates on the theme from the second half of the twentieth century - these, in addition to the return of typology, bring criticism to modern architecture and urbanism and its homogeneous spaces absent from historical considerations. According to Harvey, at this moment, the concept of the fragmented urban fabric is taken up from a "palimpsest" of superimposed forms and the collage of uses that can even be ephemeral[21].

Considering this recent history of urban design, some authors work on the idea of typology as a means to solve problems: Aldo Rossi[22] works on the concept as a critical device for thinking about the city; for Anthony Vidler[23], the city itself is a typology and reasonable basis for the return of a critical role for the discipline; for Alexander Cuthbert[24], focus on this topic, typologies are thinking tools and the basis of the discipline with a privatized urbanism as context.

Cuthbert approaches typology from the cities, but considering the analyzes of disciplines associated with or derived from the urban design that point to urbanization processes beyond the cities. His trilogy (*Designing Cities: Critical Readings in Urban Design*, 2003; *The Form of Cities: Political Economy and Urban Design,* 2008; *Understanding Cities: Method in Urban Design*, 2011) focuses on urban design based on a critical examination of self-referencing of the discipline and its removal from political and economic issues. For this approach, the author divides the three books into chapters on essential themes (being typology one of them) that unfold based on an evaluation of the available debates on each theme. It also considers the spatial political economy to assess the uneven development of knowledge about urban design and how it can be corrected.

For Cuthbert, the idea of typology permeates urban design concerning structure, function, and shape and reflects the need to classify the parts of a problem under investigation. In addition to classification, the concept aims to consolidate the relationship between economics, social processes, and urban forms, considering that past events contribute to urban research being historical[25]. According to the author, the tools available to the planner to control such phenomena are insufficient, especially considering that many countries do not have planning systems. In contrast to Brenner, instead of trying new descriptions for emerging forms of global development, a more productive method to understand form is to examine the origins from which these forms emanate.

In *Designing Cities*, Cuthbert points out that, with the complexity of current phenomena, urban design cannot be delineated by any theory alone[26]. Therefore, in *The Form of Cities*, authors from other disciplines are brought into this debate. For example, Peter Saunders works on theoretical forms of urbanism, not types of city, but types of thinking about urbanism, especially given the new urbanization processes pointed out by Brenner. Edward Soja has a greater focus on the conceptual framework of postmodern urbanism and its geographic extension. The author points out that the coincidence between the industrial era's materiality and the cyber cities that are being built on the old infrastructure generate the need for entirely new conceptual systems, relating new patterns of human and informational activity with the nostalgic conceptions of the place. By proposing original vocabularies to encapsulate new phenomena, Soja comes close to Brenner's approach and the need to understand and name emerging urbanization processes.

From this approach to related disciplines, Cuthbert reflects on the types of “morphed landscapes”[27], landscapes that are produced from changes in social development. It also resumes the work of Arjun Appadurai, which denotes a basic typology consisting of other dimensions of the global culture of flows, such as “ethnoscapes”, the landscape of people who constitute the dynamic world in which we live, tourists, refugees, exiles and other groups and individuals on the move and “financescapes”, the disposition of global capital that moves at high speed.

The typology examples illustrated above by Cuthbert are applied in several ways, but, above all, as tools of thought, methods of analysis, ways of ordering and classifying phenomena, and of generating vocabularies. Its use can be expanded as new phenomena are investigated. Using typology as a method of analysis, Cuthbert examines movements of private appropriation in which, operating in a symbolic space outside the individual management of nations, transnational corporations influence to

transfer state political authority to the private sector [28]. In this context, capital, increasingly consolidated, conducts megaprojects of generic urban design (regeneration of maritime fronts, recovery of industrial areas, construction of new transport structures, renovation of historical centers) that try to generate new types, but do not consider the social change as a necessity. As the author points out, these projects assume the function of a show promoting the consumption of high mass standards and the national urban identity, especially via mega-events and iconic architecture. In this process, urban design is used as a marketing strategy aiming at the "economic and cultural development" of a city through what Cuthbert calls urban branding. The idea of consumer goods brands transferred to promote the city through cultural flagships and festivals, creating a form of “karaoke architecture” for which it is not important if you can sing well, since you do it with enthusiasm[29]. The objectives of this architecture are opposed to the political function of the public domain to reinforce social life, culture, heritage, and traditions. While this influence of the private operates at the local level, global consequences, especially in developing countries, will unfold. The spatial effects of these global processes on settlements and urban forms are evident. As Cuthbert points out, issues related to the brand, thematic urban design, iconic architecture, creative class, and economic success of cities are intertwined with the new urban form and neocorporate strategies about the occupation of urban space, use, and image. We extended this understanding to the idea of the city as a triumph of the urban era that ignores extended urbanizations, and that can be illustrated with the example of Dubai and its invisible spaces.

In Dubai, 82% of the population is foreign. In addition to the phenomenon known as “transient urbanism”[30] that happens because workers often return to their home cities, there is also an invisible public domain[31]. This population lives in temporary facilities on the periphery, an area not frequented by locals and tourists. A predominant quality exhibited in these invisible spaces is the association with the place, despite the transitory nature of its occupants: immigrants give meaning to these places by navigating the local space (the city) and the global space (their native country). These are typologies, in addition to urban agglomerations, that reflect socio-economic conditions - the slum space, the global migrant, and the world's disappointed ones generate a new formal vocabulary of urban space.

4. Final considerations

Although Brenner considers the use of the term unnecessary, it is essential to use the concept of typology to recognize emerging forms in contemporary times and not only their processes, since these forms, being dynamic, leave signs of the urban in areas that were once natural. Still, if the city of neoliberalism makes urban intervention models more flexible to meet the development of capitalism, the urban typology must be thought beyond the fragmented spaces of the city. To this end, systems for classifying processes that are still unknown are important for spatial planning - and considering them unnecessary can make it challenging to understand the contemporary urban space that goes beyond the idea of the city.

If for Lefebvre, in *The urban revolution*, society was completely urbanized, Brenner updates this hypothesis by stating that the phenomenon of global urbanization has happened unevenly, on a worldwide scale, as well as in specific territories, regions, and places; and explores some of the broader social, political and environmental implications of this state. We also add that the understanding of the emerging urban transformations remains unknown to most of those involved in the architectural discipline itself, primarily when related to the countries of the so-called "global south".

Therefore, in addition to the dialogue between Brenner (the investigation of urban processes should overlap the analysis of settlement typologies) and Cuthbert (the examination of historical typologies contributes to the understanding of current urban processes), it is worth mentioning that the permanence of criticism to reality requires recognizing the recent changes in urban configurations. In this sense, Cuthbert and Brenner's ideas converge to the same point: the first analyzes urban types; the second defends a reading of the urbanization processes, but the overlap of the two points of view is essential to understand the urban spatial evolution in the third millennium. It can contribute to the implementation of projects with strategic aspects related to the dynamic lines of force, flows, and immaterial aspects, advancing to structural functions and articulating systems that organize the contemporary urban space.

Acknowledgments to Fundação de Amparo à Pesquisa do Estado de São Paulo for funding the research that led to this paper (Process nº 2016 / 22499-5).

Notes

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