Master of Art and Design for the Public Space

Producing *LudiCity*

Redefining public space by reconfiguration

through the act of play.

Derek Orlandi Oliveira

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Produzindo
Ludicidade

Redefinindo o espaço público

por meio do ato de brincar.

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1. ABSTRACT

Although public spaces are thoroughly designed to suggest to its user the desired accepted behaviour, people often use these spaces to satisfy their own necessity. In a public square that contains various elements such as benches, lighting, monuments and greenery, people tend to appropriate the existing conditions, reconfiguring them as needed resulting in a unique spatial definition. In a way, the public space is seen as a neutral ground that accommodates numerous interactions done by people. Through an observation exercise, it is hypothesized an intrinsic relationship between individual and space. One produces the other, which in the end restitutes the first producer. An act of play with roles and definitions, inputs and outputs that changes every time the parameters are modified. It is similarly compared to an electronic device, a public space computer program where actions are fed into the system in a game-like situation, that causes the individual to gain something as consequence of a specific interaction. The public space can be a metaphoric game to be played in exchange for experience while reconfiguring the environment producing definitions. By establishing that actions in public space produce definitions, the question that follows is what is the action that can produce the most definition? Play is an action that can assume any form of narrative, it is the action that creates a process of experimentation with different elements, transforming a serious situation into a fun ludic performance. Playing in public space is not only fun but it creates the data necessary to analyze the different inputs and outputs of an individual's action. As play presents itself as a free action, this might manifest into various definitions. Therefore, to create action in public space, two games were developed and experimented with. The first game approaches the play through explicit instruction, openly suggesting the player a list of movements necessary to complete the game. The second game presents the player with pieces with tacit instructions, meant to be interpreted through play to achieve an objective. In the end, both games are an attempt to reflect on how public space is being accessed through interaction. It is about playing with different urban elements while appropriating public space, creating urban artifacts that express an individual experience and finally establishing that public space as a neutral ground can nest numerous definitions.

Embora os espaços públicos sejam minuciosamente projetados para sugerir ao usuário o comportamento desejado e aceito, as pessoas costumam usar esses espaços para satisfazer suas próprias necessidades. Em uma praça pública que contém vários elementos como bancos, iluminação, monumentos e vegetação, as pessoas tendem a se apropriar das condições existentes, reconfigurando-as conforme necessário resultando em uma definição espacial única. De certa forma, o espaço público é visto como um terreno neutro que acomoda inúmeras interações feitas pelas pessoas. Por meio de um exercício de observação, é hipotetizada uma relação intrínseca entre o indivíduo e o espaço. Um produz o outro, que no final restitui o primeiro produtor. Uma peça com funções e definições, entradas e saídas que mudam sempre que os parâmetros são modificados. É similarmente comparado a um dispositivo eletrônico, um programa de computador do espaço público onde as ações são alimentadas no sistema em uma situação de jogo, que faz com que o indivíduo ganhe algo como consequência de uma interação específica. O espaço público pode ser um jogo metafórico a ser jogado em troca de experiência enquanto reconfigura o ambiente produzindo definições. Ao estabelecer que as ações no espaço público produzem definições, a questão que se segue é qual é a ação que pode produzir mais definição? Brincar é uma ação que pode assumir qualquer forma ou narrativa, é a ação que cria um processo de experimentação com diferentes elementos, transformando uma situação grave em uma divertida performance lúdica. Brincar em um espaço público não é apenas divertido, mas também cria os dados necessários para analisar as diferentes entradas e saídas da ação de um indivíduo. Como o jogo se apresenta como uma ação livre, isso pode se manifestar em várias definições. Portanto, para criar ação no espaço público, dois jogos foram desenvolvidos e experimentados. O primeiro jogo aborda o jogo por meio de instruções explícitas, sugerindo abertamente ao jogador uma lista de movimentos necessários para completar o jogo. O segundo jogo apresenta ao jogador peças com instruções tácitas, destinadas a serem interpretadas através do jogo para atingir um objetivo. No final, ambos os jogos são uma tentativa de refletir sobre como o espaço público está sendo acessado por meio da interação. Trata-se de brincar com os diferentes elementos urbanos ao mesmo tempo que se apropria do espaço público, criando artefatos urbanos que expressam uma experiência individual e, finalmente, estabelecendo que o espaço público como um terreno neutro pode abrigar inúmeras definições.

Keywords

Play; Public; Space; Reconfiguration; Definition; Configuration; Artifact; Object; Interaction; Action; Narrative; Fun; Ludic; Creativity; Process; Input; Output; Game; Instructions.

Brincar; Espaço; Reconfiguração; Definição; Configuração; Artefato; Objeto; Interatividade; Ação; Narrativa; Diversão; Ludico; Criatividade; Processo; Saída; Jogo; Instrução.

2. Introduction

This dissertation was developed to explore play in the public space through project-based appropriation, reconfiguration and redefinition of the public space.

It is general knowledge that cities are a product of human activity, throughout history, people often gathered in small communities to exchange products, knowledge, experiences and engage in cultural rituals. The *agora*, usually located at the center of the city-states of ancient Greece was a place that served for several civilian activities. A trade, political, religious, commercial and social space designed to promote activity, it was the essential part of civilian life to be a part of a space that generated social awareness and community spirit (Britannica, T. Editors of Encyclopaedia, 2017)[1]. These are known starting points for any city on earth, a place where people would come together and create their space to interact with it. The intrinsic relationship between space and human activity allows endless definitions that transform any space into a useful configuration for social interaction. Just by walking awarely through a configuration of a city, we see these definitions occurring. A musician playing for a crowd at a plaza defining the space as an amphitheater, a street merchant exhibiting several goods along the sidewalk defines the space as a store or even when a restaurant utilizes the public space as an extension of their business defining that space as a restaurant. The space allows people to produce their activities, a blank canvas spread out as it modifies into something different. Millions of definitions are being done simultaneously in public space. For example, a person defines their space by transitioning from point A to point B, a redefinition of a configuration that includes several transportation modalities in this person's space, enabling movement. A street performer that reconfigures a public bench for performance and creates space for many spectators. Or even someone who sits and contemplates a city's scenery, regarding the action being produced that defines the city itself.

1 Britannica, T. Editors of Encyclopaedia (2017). Agora. Encyclopedia Britannica. Retrieved from https://www.britannica.com/topic/agora.

But what is this space, a blank canvas that enables humans to perform their actions? — Henri Lefebvre specifies in The Production of Space (1974) the differences between social space and nature. Social space is a product of work, while nature has no conscience of existence. Nature is space in its natural form, it does not labour, it knows nothing of its creations. It grows, dies and consumes itself in an infinite sequence. Humans, however, create work and produce things. They manipulate their surroundings to achieve a goal, thus giving space functionality. They create a social space to permit new actions to occur. It is implied that social space is a diversity of knowledge, a place that allows multiple interactions (Lefebvre, [1974] 1991, p.70-73). Therefore, public space is a place that allows people to produce any activity, a place of intense diversity and knowledge where people define it through their actions.



Fig. 01 Spatial definition into an ephemeral auditorium. Source: Author.



Fig. 02 Spatial interaction defining the immediate suroundings. Source: Author.



Fig. 03 Social gathering to play card games. Source: Author.

On a similar approach, Superstudio's utopian theory suggests a world where space is divided into a massive grid system to distribute resources to all its inhabitants better. The social space is viewed as a place for interrelationships, cultivating social activities as its primary output. It also could be a series of nodes or terminals positioned inside the intersection of the gridlines where people would connect to these outlets to satisfy their needs (Radical Architecture, 1972). Superstudio's argument suggests a fixed terminal located on a geographical coordinate

would supply humans with enough resources to survive, opening new possibilities for action in public space that wouldn't depend on survival. The public space would be open for new utopic definitions, opening new worlds within the real world where people find new ways to appropriate the public space.

Lefevre and Superstudio's definitions are a stepping stone to explore different ways people are interacting with the public space. If performing an action in public space redefines its characteristics, what type of action would allow the most definitions in public space? — During the development of this thesis, there were strong indications that a game was being played to interpret how people interact with the public space. Through observation, the public and private spaces are constantly being accessed by terminals. Bus stations with vending machines and ticket booths, bank ATMs that provide financial operations or even commercial entrances where people walk in and out at every moment are all spaces being accessed are defined by their usage. Video Games in the twenty-first century often try to translate these actions into a series of utopian events, creating narratives and excuses for a user to interact with a specific place. The Sims game series was first published in the year 2000, the creator Will Wright imagined the game as a giant dollhouse where characters would interact with different elements of the game. For each interaction the player gained experience and unlocked a new skill set. The game played by millions of children was a sensation, it tried to imitate the mechanics of real life (James, 2017). With the interaction comes experiences, artifacts and quests that propel into the next interaction. These imaginary narratives create motives to interact with the public space, by treating the real world as if it were a game as we play with the configurations, these actions could generate various spatial definitions.

Johan Huizinga's book Homo Ludens (2003) brings a new perspective to the relationship between games and human actions. According to Huizinga, play is the initial action that develops into more complex cultural rituals. As infants, we instinctively play to understand and establish ourselves in the environment we live in. It is the basic primal interaction that builds into rituals and culture. Also, Huizinga suggests that play allows the individual to create

a parallel world, establishing rules and rituals through narratives, thus setting aside formalities to perform differently. It is an excuse to act in a non-ordinary world freely, creating new rules established by a narrative ([1938] 2015)[2]. Play enables the individual to create different realities, establish rules and guidelines to build upon what already exists. It is the action to be experimented with while appropriating and redefining the public space.

What is the purpose of this dissertation? — The authors Henri Lefebvre and Johan Huizinga help lay down an initial foundation to what is to be expected throughout this dissertation. To better understand the public space as a place where people are unknowingly reconfiguring space by defining it through game-like activities. The objective is to stimulate action using a set of rules and rituals, influencing the natural convection of a place inducing people to want to participate in spatial micro reconfigurations. It hopes to be a medium for new discussions on how space is currently being produced not only by architects and engineers, but by the people that are always using the space. Also, appropriating and modifying the public space by experimentation, a series of games designed to create action and study the outcomes. A game that uses elements found in a preset configuration as well as the introduction of new objects to promote the user to build new individual narratives for the redefinition of the space. It is an attempt to break the seriousness of the production of boring well known spaces and introduce creative new playful tools to produce new spatial outcomes.

These ideas are a result of a process of personal interests going back to my infancy, as a child, the chosen toy to spend most afternoons at home was the LEGO[3]. It was amazing to sit in a room surrounded by thousands of pieces awaiting to be assembled and meet the narrative. The experimentations were always needed to find the right combination of pieces to achieve the desired result, pure excitement. During the architectural bachelor's degree, it was understood that the traditional way of thinking taught at the school was never going to define

2 Original Portuguese passage: Huizinga, Johan. (2003). Homo Ludens: um estudo sobre o elemento lúdico da cultura. Lisboa, Portugal: EDIÇÕES 70.

3 Danish toy production company best known for the manufacture of Lego brand-toys.

future practices. Although designing a building in the traditional way seemed fun, trying to experiment playfully with architecture seemed to have a bigger interest. All the projects done since the realization have unknowingly turned back to the way people reconfigure things. By giving the opportunity for an intervention in a space with objects and a set of rules, the result of any interaction, even if nothing has been done, will reconfigure and define the space for the individual interacting with it. The same idea is found in LEGO, whatever interaction that is made between the object and the individual, there is an object and a discussion as a result. As a consequence of this, the following year at MADEP[4] was an attempt to bring into the public space my previous practices of play. By using the same logic as LEGO, the public space would be the environment chosen to play and create discussions as a result of experimentation analysis. A simple act of play could help read what type of space people create when in a free non judgemental environment. The creation of an artifact could be the translation of the discussion into an object that defines the space. As a result, the action play argues that a city isn't an enclosed micromanaged system, it is a product of millions of unpredictable interactions made simultaneously, a living organism that is reconfigured daily by its users. Play is just the means to recognize what is the outcome definition of a space when using it subjectively.

Research Questions

This dissertation's intention is to comprehend and understand how people appropriate, reconfigure and define public space. Throughout the design of the games meant to be played in public space, the investigation continuously matured and evolved with each phase of the process — during which a set was experimented with different narratives and settings — was completed. To essentially play in the public space wasn't enough for gathering information. The activity in public space had to follow a parallel line of questions as guidelines to better distinguish the outcome information. As creator of the game series, it was expected for my contribution to be the first attempt at playing the game. The personal experience and

4 Mestrado em Arte e Design para o Espaço Público. Translation: Master of Art and Design for the Public Space.

close contact with the problematics of the game would instigate a number of questions that needed to be answered or acknowledged. By understanding the questions, the "what am I looking for?" The question became more clear on what information is the correct one for the analysis. As the next participants volunteer to play the game, the questions have already guided the study. Also, the questions are initially hidden from the player, the action must avoid contamination and the player must be unaware of the objectives. The performance must be as natural as possible matching what a person might do in the real world situation. Only after the conclusion of the game the questions are revealed for discussion.

These three questions are a result of my interaction in public space, using play as an excuse for action. The first question, "How can the process of play help recreate public space through reconfiguration?", appeals directly to the more visible problem of the game. If a person reconfigures a space, naturally it is a new creation of the same individual. But what is the individual's process in order to play in public space? What is the player's methodology to achieve the goal of the game? — this is the first piece of data needed to infer that action in public space is subjective, even when following established rules or instructions, each outcome is different and it all depends on the individual's personality and experiences.

The second question, "How does play influence other fields of investigation to better understand the public space?" suggests that to reconfigure a space a person will unknowingly investigate the configuration available. This question was designed in a way to track down a person's interaction with the immediate surrounding. While playing the game, what are the elements that influence an action? What outside objects can become part of the game and how much creativity is demonstrated during the narrative, transforming play into a unique experience? — These questions bring to evidence the complexity of understanding the public space. By using play as the action that reveals the physical and imaginary elements that make up a configuration and how people can use this information to their advantage.

The last question, "How can we create different experiences in the public space through play?" regards the type of experiences that are a consequence of social-spatial interaction. When performing an action in the public space, the surrounding space is appropriated into a narrative established by the individual. Whatever outcome presented is transformed into an experience to be carried out indefinitely along the different configuration settings. This is better seen through video games, when an avatar completes an action, it gets rewards points or experience to level up. There are no indications of losing these points and the player carries on the experience until the end of the game. This question investigates what are the experiences gathered in the public space, how do players tap into their experience while repeating another action and how does the information previously gathered influence the next performance?

The research questions are a part of the methodology used in this dissertation as they've guided the development of the practical experiments. By understanding what action to look for in the public space, secondary questions and solutions start to appear. These problematics are elements that stimulate the research forward, trying to find uniqueness and diversity in every player. And that is the objective, to highlight a person's individualities in a public space and transform this data into something interesting.

Methodology Map

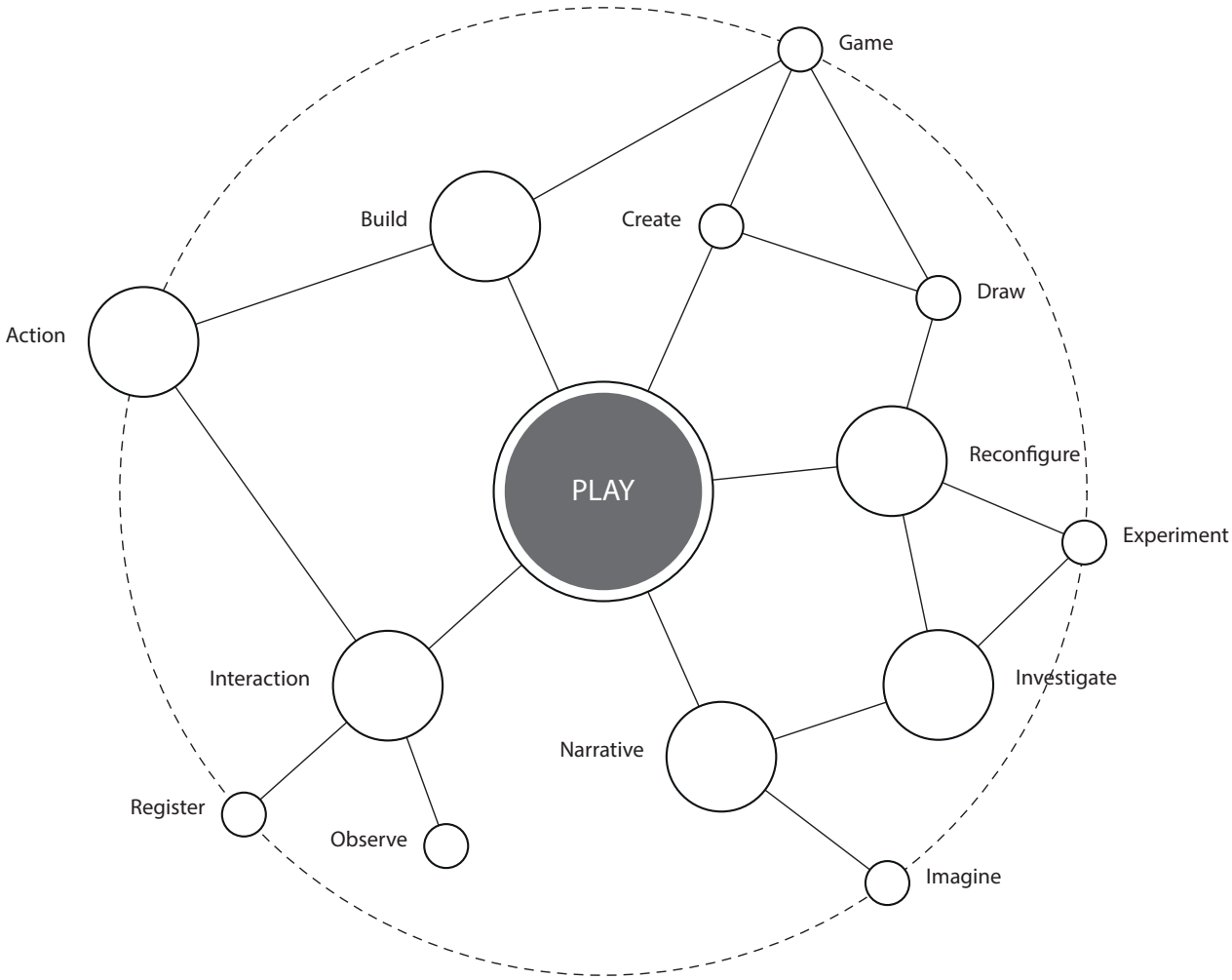


Fig. 04 Methodology diagram. At the center the objective is given, while each surrounding action is necessary to achieve this goal. Source: Author.

Methodology

It was stated in the beginning of this section, play will be the how in the attempt to approach the goal which is to understand the different ways people interact in public space. All the actions necessary to achieve this goal in this dissertation must be done in a playful manner. Thus raising the following question: To play, what are some of the secondary actions necessary to achieve this primary action? — This was the first idea behind the methodology, to imitate a few of the secondary actions observed in play and see the potentiality of it in the investigation. A few examples of these secondary actions were to experiment, to manipulate, to imagine, to investigate, to build, to draw, to reconfigure and to register, all represented actions that were found when playing. These actions follow a personal interest and experience ever since my childhood when playing in a room surrounded by LEGOs. Therefore the challenge wasn't to find these secondary actions but to choose which action to perform in public space resulting in interesting data for analysis. At the start of the game development phase, a list was created to be performed in the public space. Although the format seemed to fulfill the initial objective, to perform an action that results in play, the list seemed to suggest a sequential evolution towards the action. To do this action, one must first do this following that to finally reach this goal. And that is not the essence of play, there are no sequences or right ways of playing. The methodology couldn't be a straightforward process and development, it had to follow a random path, it had to be cyclic containing multiple combinations of actions done to achieve play. To do this, the methodology was designed to be a circle where at the center the objective is play. By understanding the objective, each action could be executed randomly following the narrative set by the player. Using an interactive design of participatory actions was employed resembling Huizinga's Magic Circle Theory (Huizinga, 2003), where a parallel utopic world is created inside the real world mimicking certain events through game-like characteristics. By establishing the combination of actions inside the circle, no matter what the combination, at the center play will always be the protagonist's action. This methodology is applied for all the events held during the games. While analyzing how people define and interact with public space, it is also important to observe how the methodology is applied not only by the researcher but also by the player.

Content Diagram

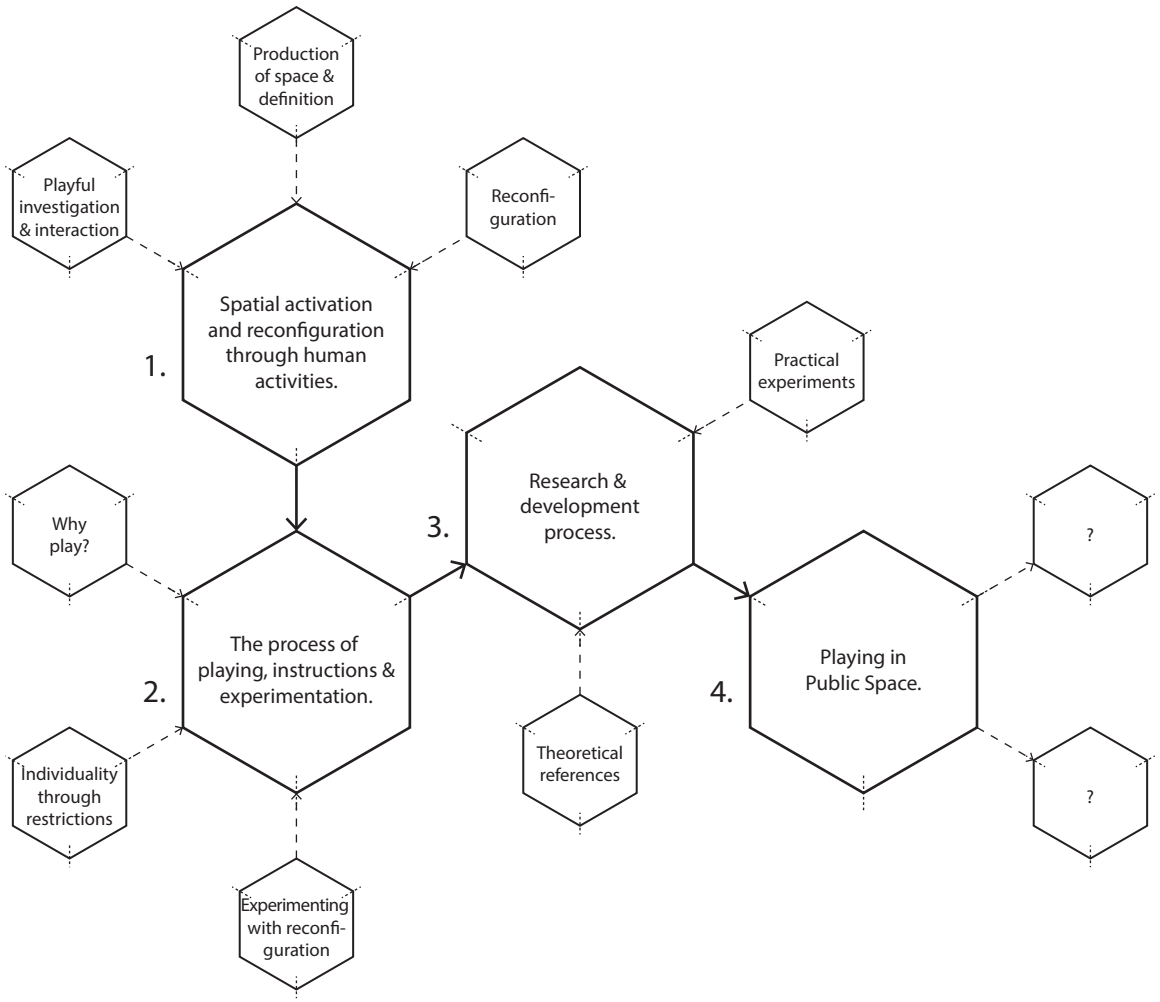


Fig. 05 Content diagram showing a progression of topics towards the main objective: Playing in public space. Source: Author.

Dissertation Structure

The structure of this dissertation is divided into three sections. The first two consist of theoretical research with added exercises that attempt to recreate the theoretical discussion through a designed process and project. The third section is the practical approach to the dissertation. The dissertation utilizes the references researched to develop two games designed to be played in the public space and produce data. The results are then to be analyzed and discussed in an attempt to answer the research questions mentioned above.

The first section is titled "Spatial activation and reconfiguration through human activity". To better identify how humans interact with public space, first it is necessary to establish what is this place and what are the configurations and elements that define it? — The initial ideas have a personal side to the dissertation, this is a reflection on some of the experiences gathered along the academic years put into a discussion that leads to playing a game to understand my environment. These reflections are a reference to Guy Debord's Theory of Dérive, where a playful constructive game connects the players to the immediate urban environment. The game-like events inspire a different investigation inside an urban configuration where the main objective is to create discussions leading to spatial awareness and a potential artifact ([1957] 2006, p.62-66). By establishing the public space, the focus changes towards the interactions done simultaneously in this space. This is where the research goes deeper into Henri Lefebvre's The Production of Space, arguing how the definition of a space is as a product of an action. Also, creating a cross-reference with Joan Littlewood and Cedric Price's project The Fun Palace. The project developed during the 60s had the intention of creating a laboratory of fun, a building capable of reconfiguration to meet its users' necessity while creating knowledge in the process (Mathews, 2005). Also, as a practical example, the project titled Plugging into Gaia is presented. A performance in the public space that understands the space as a video game where the avatar is followed by the viewer as it interacts with different elements in the public space. In conclusion, as the ideas cross-reference to each other, the practical exercise complements the discussion presenting the intended content necessary to continue on with the research.

The second section is titled "The process of play, instruction and experimentation". To better analyze the potentiality of play as the protagonist's action in the public space, an initial study must occur to lay down foundations on the motives behind this action. To play is to perform a free action? Yes, but what are the benefits of play? — A quick study on educators and psychologists such as Lev Vygotsky[5], Friedrich Fröbel and Mitchel Resnik[6] breaking down how to play affects the development of an individual. By eliminating the seriousness of a situation, the individual feels free to try and experiment with no fear of error or social disapproval. These ideas are what propels this dissertation to continuously use play as a tool for experimentation in the public space. Also, bringing the augment that play can be a generator of narratives by creating situations, events and instructions. By the creation of an imaginary world, the rules are set by the player and the game follows its trajectory towards the completion of an objective. It is through the instructions established by the narrative that the outcome as a consequence of individuality becomes more evident. The concept of people performing an action in perfect unison is flawed and the game reflects how play values disharmonic conclusions. As a practical example, the *Cata-Vento*[7] project experimented with a modular building system to create a windmill that evidence the importance of wind in the Portuguese heritage. By experimentation, each attempt to construct a windmill resulted in different versions, thus demonstrating the theoretical implications of using the process of play. This segment aspires to understand and register play as a subjective action when performing in the public space. In a way, by creating narratives and eliminating judgemental behaviour, play induces the individual to explore different problematic solutions to define their space.

The last section titled "Research and development process" is a combination of the first two parts of this dissertation put into practice through the design and conduction of two play exercises done in the public space. By creating a spatial definition through an action that leads

5 Original Portugues passage: Gonçalves da Silva, Flávia & Davis, Claudia. (2004). Conceitos de Vigotski no Brasil: Produção divulgada nos cadernos de pesquisa. In (Vol. 34, pp. 633-661). São Paulo, Brasil: PUC-SP.

6 Resnick, Mitchel. (2017). Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers and Play. In [Kindle Version]. Retrieved from www.amazon.com.

7 Cata-Vento, Brazilian Portuguese word for windmill.

to a definition, the development of the games are meant as simple experimentation in the public space. The two games were designed to reimagine and reconfigure the public space by performing simple tasks. The first game is set through distinctive instructions explained to the player. As the game progresses, it is observed each reaction that altered the way the game is played thus changing the conclusion. The second game implies the instructions through different puzzle pieces of wood, the idea is to stimulate the player to understand the environment and recreate an artifact by reconfiguration of the space through the pieces. Both games set in the public space are open for interference by whatever event, element or another individual that feels interested in the performance. They present themselves as experiments where the ending result is a memory and a discussion on how through play, humans intend to create ideal configurations to meet ephemeral necessity.

A secret fourth section titled "Playing in public space" is an invitation to PLAY!, to have fun and experiment with the public space.

3. SPATIAL ACTIVATION AND RECONFIGURATION THROUGH HUMAN ACTIVITY

This chapter reflects the motives and consequences behind the spatial activations done by human beings in an urban context. Although humans are the main subjects of this investigation, they are not the only living beings that influence the usage of public space.



Fig. 06 Multiple spatial definitions happening at the ephemeral city. Source: Jamen Percy.

Taking a moment to look around a specific urban context, specific conditions were observed where citizens of a configuration are constantly activating the public space used. As social individuals, humans are naturally driven to interact with elements they deem attractive, either for leisure or necessity, at a specific moment, interaction with a space is inevitable. These interactions activate and briefly define the social space, mainly leading to a physical interaction that causes constant modifications to its urban context. These interactions can generate different objectives in which their achievements reap certain benefits to gain advantages. A strategic move is made by an individual determining if the interaction will grant the sufficient means to survive as an active citizen. As an example of this, while strolling around Porto's Baixa district, absorbing the scenery, it was noticed how different people were activating the same public space by behaving a certain way. On the one hand, tourists mainly focused on spatial

activation through digital media interaction while taking pictures of any scenario and physical interaction when activating the spaces through restaurants and gift shops. The intention with the space was clear, to enjoy what the city was offering. On the other hand, locals were focused on surviving as part of being residents of that city. They transformed the public space into different small businesses located anywhere that would benefit them the most by attracting people to interact to earn money and survive. For each group, the objectives were clear and doing so determined different definitions for each interaction. The public space was a diverse concentration of definitions, each one using it for a purpose. This phenomenon shifted the understanding of what truly denominates the type of space used by its users[8]. It is a neutral place, the name or definition isn't the one written on a plaque stuck to the ground but is embedded in the activity done in that space. The space could be associated as a neutral ground filled with "public terminals[9]" like urban furniture, public wi-fi and shops. While humans access these terminals, the space is defined according to their activity. Somehow it feels like an 80's film, where technology starts to incorporate ordinary people's lives, drastically changing society into a cold, uniform utopia. But public space is supposed to be neutral, it should accommodate different activities and allow multiple interactions to occur. This goes against personal academic and professional experiences while practicing architecture in the public space.

Through architecture, the urban configuration is recreated, from a natural point, a project transformed and denominates new usage to the local population. The interactions are expected to be uniform, a bench will serve its purpose to be sat on, which isn't the only acceptable usage. But as stated before, control of the space is an illusion, public space isn't The Sims[10], where the player controls an avatar doomed to roam around doing things as commanded. It is a free environment filled with configurations ready to be appropriated and used by its users, consequently defining their space.

8 User: A person who uses or operates something, especially a computer or other machine. In this dissertation, a person who uses public space. Similarly to a character in a game or video game.

9 Terminal: A point of connection. In the city a terminal could be either public or private space.

10 The Sims is a series of life simulation video games developed in 2000 by Maxis and published by Electronic Arts.

Modifiable space versus reconfigured space

During the first year at MADEP[11], it was challenging to break from professional habits or default mindsets created along the personal journey allowing for new investigations to occur that helped absorb further information about the city. The first assignment was an invitation to create a performance in the city, specifically at the Avenida da República in Vila Nova de Gaia, an important avenue connecting this city to its neighbour Porto. Building upon other theories on public spatial definition through human actions, the first attempt tried to materialize in a simple way how people usually activate spaces and thus defining them according to their outputs. The best way to illustrate this idea would be to recreate a video game experience where the player started by walking into Vila Nova de Gaia from the Luís I bridge[12]. The objective would be to fill a bag with items that would allow the player to survive like any other person in that street. The task list consists of food, money and transport ticket. While the player progressed into different areas, its activation allowed for the gain of the desired necessities. As the performance played out, the notion of pretending to be inside a video game didn't perceive as crazy behaviour, it felt like ordinary life, a normal day-to-day situation any person would a subject. Therefore, it was determined that public space resembled a game filled with different terminals to be accessed to survive. The urban game consists of an action-reward system where is the player works it receives payment, if the player wants to progress and survive, it needs to pay for different amenities and necessities. As the terminals are being accessed, the definitions start to emerge, the neutral space is now giving the players a platform designed through the actions. By playfully investigating and viewing the city from a different perspective, an initial association of the public space to a game allowed the analogies to happen. By implying that public space is a game set of inputs and outputs, now what needed to be done was a continuation of the playful investigation on how people access these terminals and what are the many outcomes as a result?

11 Mestrado em Arte e Design para o Espaço Público. Translation: Master of Art and Design for the Public Space.

12 A double-deck metal arch bridge that spans the River Douro between the cities of Porto and Vila Nova de Gaia in Portugal, designed by Théophile Seyrig in 1881.

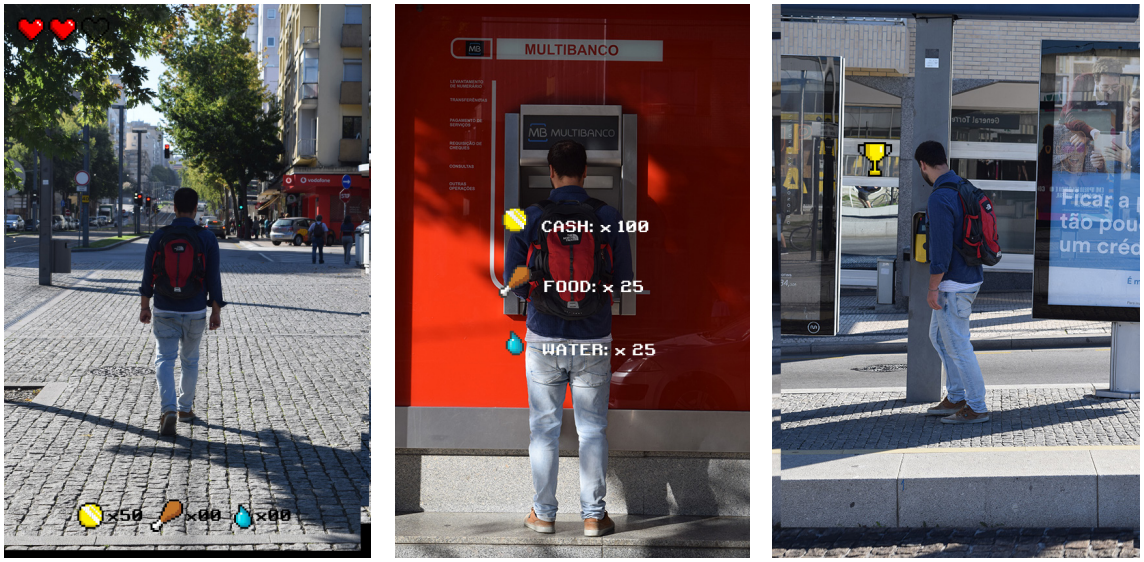


Fig. 07 Plugging into Gaia Screen shot sequence. Accessing the space through interactions. Source: Author.

According to Situationist International's Guy Debord, dérive is the practice of playful investigation while moving around a specific urban área. Awareness of the public space is key to encounter whatever is attractive in a specific configuration. The Theory of Dérive suggests that the physical aspect of the city should not be the only factor to this awareness but to pay attention to the inhabitants and the actions of that neighbourhood, allowing the focus to be on random events is fundamental. Although dérive is a game played that can be played alone, Debord explains that when a group of people with the same level of awareness play together, the more interesting the investigation results ([1957] 2006, p.62-66).

The performance in Vila Nova de Gaia resembled a game designed to create a spatial interaction experience, a game played in the public space with the objective of collecting benefits while being aware of the different ways people interact in public space. This game associates space with action creating an unnoticed game-like ritual that generates experiences. In game development, it is the main goal for the designers to enable the possibility for experience. Jesse Schell suggests that a designer's creativity is focused on the different experience possibilities of the game, generating outcomes that differ according to the player. Architects and urban planners often use the same approach when creating public space, the intention of a design is to provide specific configurations that when accessed generate experience (Schell, 2008). The

game played in Gaia combined the game-like ritual with the experiences gathered along the way. It is a personal experience of the public space not shared with any other player.

The game also uses Debord's argument on the benefit of the journey that goes against the numbness of a routine. When moving through the same route every day, it is normal to blindly move through the city, avoiding the possibility of dérive and discovering the unknown. This results in unreceptive conditions for new connections, keeping a blind eye to the surrounding configuration, thus preventing the repurpose and transformation of the public space. The process of dérive is an attempt to find new ways for spatial connections, not only physically but emotionally and virtual. This implies that humans are social beings who urge for interactions by transforming the surroundings from which to benefit. It is the human essence to connect, transform and evolve.

During the development of these ideas and theories, the keyword for this investigation was discovered, "Fun". All methods used for gathering information and cross-referencing it with different playful references, such as videogames and movies, helped determine that the main objective was to use a playful approach in this research's theoretical development and practical phase. Using playfulness as the preferred action, the information gathered transformed the seriousness of understanding spatial and social interactions in the public space, relatable to personal interests.

The first associations done with how people constantly redefine space with interactions lead to the implication that space is neutral and accessed through terminals, almost a computer game-like configuration. By doing so, humans access the information needed to create different events simultaneously. This line of thought leads to the imagination of the world as a computer grid, with millions of citizens being bits of programs that access and transit different data across the urban circuit board. As the tasks are complete, the citizens shift their focus on rest and leisure, charging up the energy needed for the next task.

Jesse Schell's book The Art of Game Design: A Book of Lenses explains how game designers create a structured game mechanism that holds the aesthetics, technology and narrative of a game. The author lists three mechanisms that operate in a coherent relationship: Space, Object and Action. The first mechanism space is about the player's perception of a configuration, understanding the boundaries and dimensions of the space and where do these spaces connect with other spaces. The term "Nested Space" is one seen in computer-based fantasy role-playing games where a player is placed in an open-world scenario, free to roam and explore different access points. While accessing these points, the player is transported into another space with another configuration, a space within a space. These experiences create interesting complex dynamics, expanding the player's experience of the game where different sequential spatial interaction develops into a unique outcome. The second mechanism object deals with the ability to create a dialogue with different elements in a configuration. These objects possess attributes that are added accordingly depending on the player's state in the game. The objects of a game are progressive instructions or events that determine the desired action, the player is given the ability for decision making that can change their ability, their state and the narrative adding to the experience of the game. Finally, the third mechanism action deals with the player's ability to move according to the spatial configuration, actions that have consequences that may result in the achievement of an objective (Schell, 2008).

These game mechanics are referenced in the 1982 Steven Lisberger movie Tron. Aside from the romantic action-adventure story of the characters, the movie shows an alternative reality happening within a game. An entire universe built based on digital information interacting with one another creating a predictable routine. When humans start to interact with the mainframe, it creates noticeable change, the program notices the "errors" created by the humans and tries to "correct" them by eliminating the "users". The interactions transform the environment by accessing the terminals, therefore briefly defining the space to help the invading "users" escape the digital world. Of course, changing everyday routines in the public space isn't something to be met with extreme violence, although these are common tactics

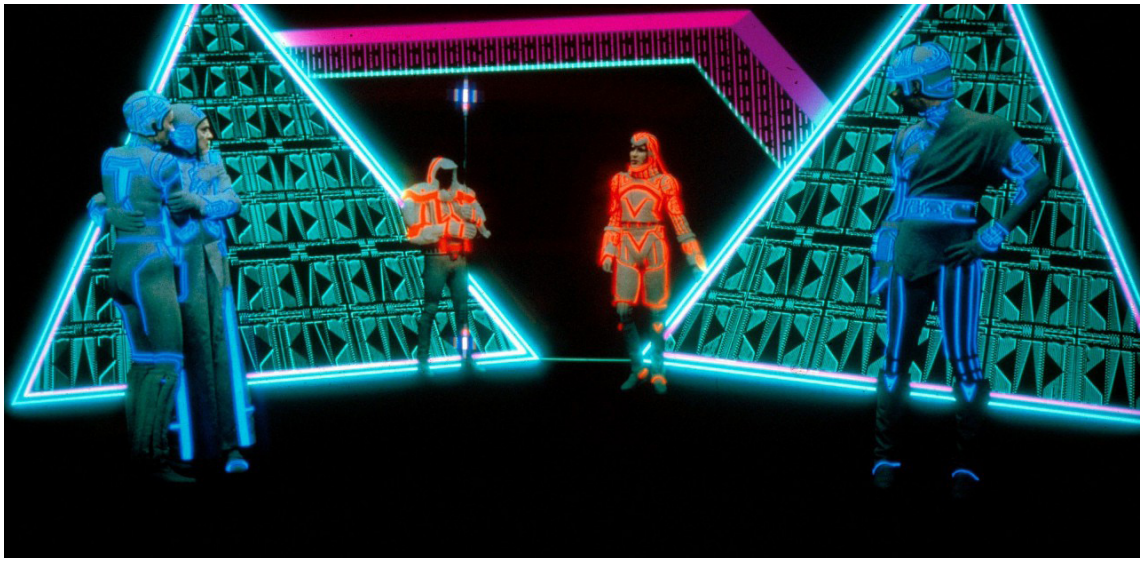


Fig. 08 Users and programs accessing the Grid City "Tron" 1982. Source: Steven Lisberger.

used by authoritarian governments for repression[13]. But the interesting bit of the movie is how its characters can create change to their immediate environment by accessing any terminal of the space, which are all interconnected. Oddly enough, it was identified that many of the references for the public space involved the idea of spatial connection and transformation. By seeking out different possibilities of using different actions to connect into a configuration, transform and reconfigure the space for the benefit of its "user". When viewing the city as a potential interaction facilitator, a first question comes to mind: how to highlight the interactions that enable the "user" to access the public space?

In the early '70s, there was a noticeable shift in architecture practices. During the modernism period, architecture was a rigid doctrine of form and function, creating imposing monuments that affected human behaviour while interacting with the space. In his book Complexity and Contradiction in Architecture, the American architect Robert Venturi argues that architecture should embrace the experiences that are inherent in art, accepting problems as it is presented

13 As an example is China's social credit system introduced in 2009 where it expands further on the idea of credit score used worldwide by banks for money loans. This system judges all aspects of normal life and determines through a score point system if a person will continue or not to receive certain rights, like buying a plane ticket, traveling by train ir even taking a loan. It is a system that controls people to do what is right according to the governments will, conditioning human behaviour to act uniformly.
Kobie, Nicole. (2019). The complicated truth about China's social credit system. Retrieved from https://www.wired.co.uk/article/china-social-credit-system-explained.

to exploit the uncertainties, choosing architectural elements that offer messy vitality over obvious unity (1977). In Venturi's argument, architecture should break free from established rules to accommodate and improvise with elements deemed unnecessary by modernism. It was an invitation to add into the space different configurations creating new possibilities for spatial interaction. The American architect Denise Scott Brown adds in her book Learning from Las Vegas that architecture should incorporate into the equation building plus space, people, buildings are built for people (1972). Critics say that architecture detached itself from social life by creating extremely controlled settings, thus resulting in controversial use of the space. An overconstrained configuration will not conform to the unpredictable human behaviour in public space. By allowing a neutral space that presents a wide variety of configurations, people exert their creativity by finding new ways of appropriating the public space for their advantage.

The Italian architecture collective Superstudio envisioned an alternative way for human life in the future. The Super Surface was a theoretical project developed in the '70s that mixed the idea of a monumental structure of necessities that stretched throughout the planet Earth, with the idea of people being able to tap into the structure to cultivate social life and transform the way of living. This structure could gather all the essential elements needed for a human to survive; information, energy and shelter, to be accessed by humans to survive. The structure would have devices located in the node of the monumental worldwide grid where the new society could instantly access their needs, thus eliminating certain humankind actions focused on extensive work, social status, power and violence. It would be a beacon for establishing a new society based on relationships, thus creating a connection between space and society (Radical Architecture, 2017). Transferring these theories into the investigation helped establish an initial methodology to playfully understand what types of "input" and "output" of the public space to examine that could bring the most data outcome of a spatial activation. The parameter list Information, energy and shelter would be essential to understand the interactions patterns and see how spatial activating was being executed and why. As observed in the reference above, the parameters work individually but can sometimes overlap one another.

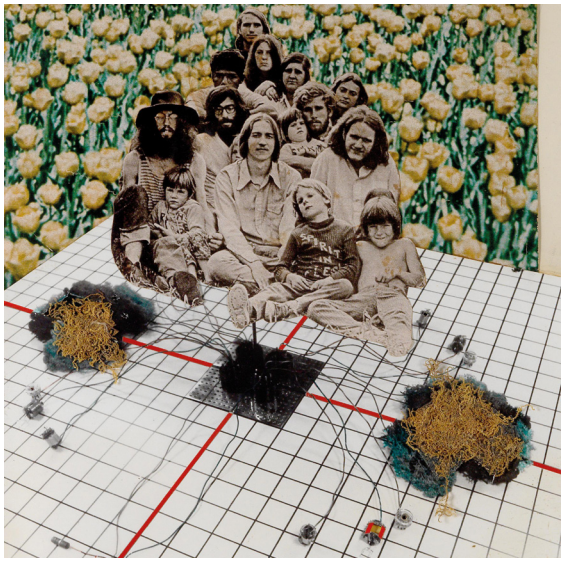


Fig. 09 Superstudio's proposed alternative model of life on earth.
Source: Piero Frassinelli.



Fig. 10 Superstudio's continuous monument where any space can be adapted to an individuals necessity.
Source: Piero Frassinelli.

The first parameter Information could be concerning the virtual public space, the connection of the public internet wi-fi network, a virtual universe that is one of the most accessed places in the public space. It could also be a bank, an ATM or even a tourist information kiosk. Information is related to the exchange of data, what space allows for the exchange of information between user and space? On the other hand, energy could be defined as anything that enables human activity through fuel for our bodies or actual electricity. A supermarket could be a source of energy, the gym could be a place to burn unwanted energy to relax and calm the body, or a public plug could be a place to recharge your phone. Energy is defined as a place for gain, a one-way transfer of substance to recharge the user. Finally, shelter is a place for protection, either physically or emotionally. A shelter protects the user from climatic conditions, it establishes a place to start everyday activities and is where the user feels the most comfort. These parameters were viewed as elements that could be interpreted according to the situation. In the case of the people at the historic center in Porto, the playful investigation led the research to analyze the "inputs and outputs" of a configuration using the parameters of the different spatial production done between tourists and locals. One group focused on enjoying the scenario as part of the information gathered, consuming experiences as part of the energy spent, and generating memories creating emotional bonds. The other group is determined to interact with the tourists, sell their work and survive.

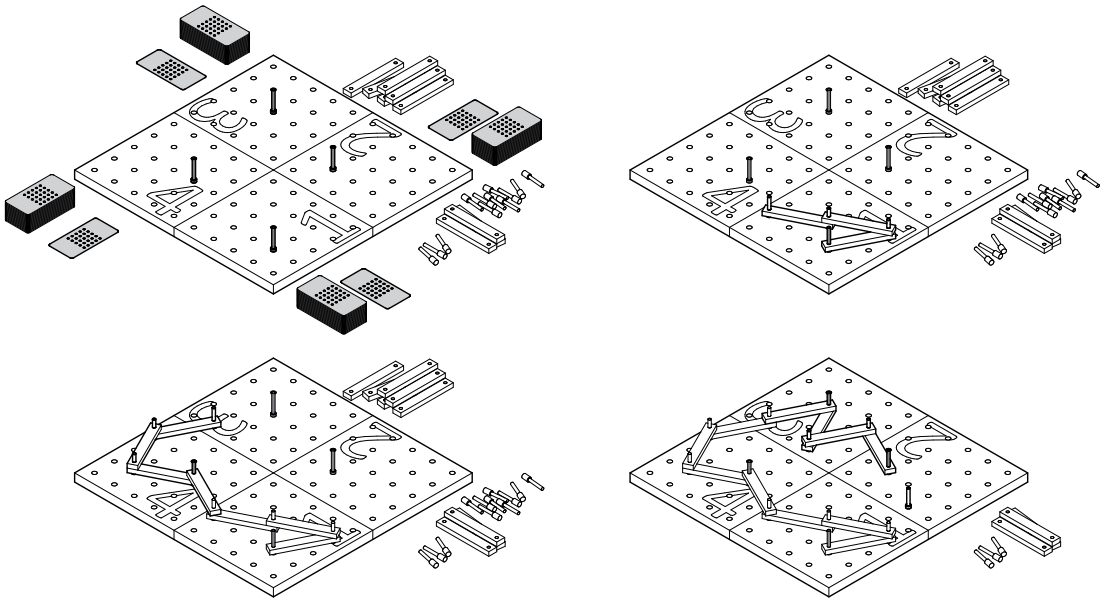


Fig. 11 Board game experiment #1Urban movement exercise. Source: Author.

While the "input" is done in an interaction with the space activated, the "output" is the result that defines the space and lasts accordingly to the individual. The interactions at the historical center of Porto highlights a few inputs of the space as consequences, the usage of benches to sell souvenirs, settling on the sidewalk to play songs and opening restaurants for people to eat. The bench selling souvenirs determines a space for economic transactions, while the musician transforms the space into an auditorium, and the restaurant can be called a restaurant because it realizes its purpose of selling prepared food for people sitting at tables. By understanding these parameters, the next step is to try and materialize the data into a device capable of translating the parameter into a board game capable of mimicking the different interactions in the public space.

The Board Game series, production of space and creating tools for investigation

As the research continued to experiment with these theories in the public space, it became more obvious that the notion of a game would be a suitable method for translating these actions in the public space into something simple as a board game. During childhood, hours spent playing with random items trying to recreate games that would redefine the purpose of an object. As observed while playing, toys were now the tools necessary to create new experiences and experiments, allowing the ideas to continue and develop the research. The Board Games series were the first attempt to recreate the conditions behind a spatial production. Although none of them were actually played, most of the development of these games helped to understand the relationship between the space produced and the interactions that occur. By presenting the player with a configuration and a set of instructions, the player acted accordingly, producing its reality to then analyze the results as a consequence. The given context led to an understanding of the configuration, creating a strategy to access the terminals and achieve the goal.

The first of the game experimentation started by using the elements of movement, drift and connection. The idea was to create borderlines randomly placed in a configuration with the objective of creating movement and connections, something that is often seen in the public space. The game was called "Frontiers" and had as reference the 1962 game designed by Alex Randolph, "Twixt"[14]. Similar to the referenced game, the game created was played by two or more players but had a different goal by attempting to connect as many "frontiers" as possible using a system of connecting rods. The first phase of the game would be the random placement of the tiles creating a configuration. This was meant to demonstrate how space is constantly changing and how the same space can reconfigure, revealing itself as a different context for different individuals. The lines representing the frontiers or barriers are the terminals to be accessed, these are objectives meant to orient players on where to go and how to navigate

14 TwixT is a two-player strategy board game designed by Alex Randolph in 1957. The board game was released in 1961.

through the configuration. Finally, the connecting rods represent movement, each step was taken in a register on what people do when in public space, the drawing is random but often influenced by the terminals leading to the creation of trails and concentrated paths towards other terminals. The result would be a random map for each game played, a map that tried to recreate the unpredicted movement and interactions in the public space. Although the initial aspects of the game conflicted with the original objective, overpowering the opponent demonstrated how the recreation of random configurations results in different interactions. The drawing of the first game was unique and not related to the drawing of the second game, one space produced could influence the flow of people while interacting with other elements or frontiers. These frontiers can be a reference to the aforementioned terminals in the public space. The first experiment didn't account for random events, narratives or the different types of interaction that could occur, the focus was only on the effects a configuration had on the movement in an urban context. It was a first attempt to reproduce a reality that happens in public space playfully.

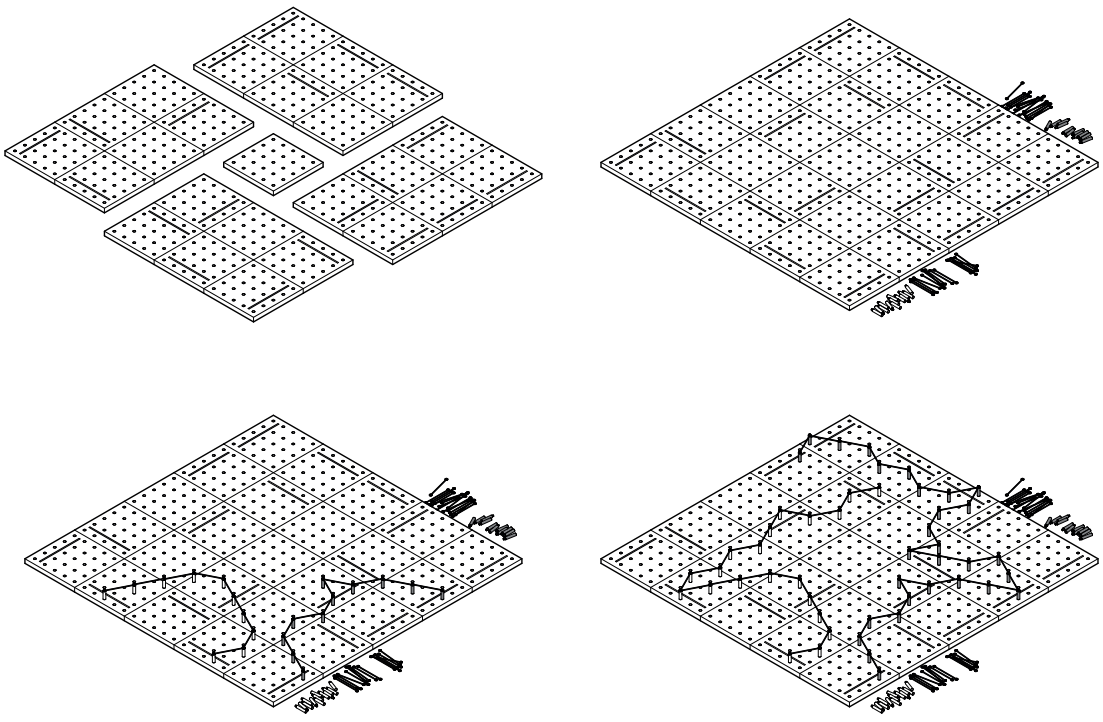


Fig. 12 Board game experiment #2 Connecting different frontiers. Source: Author.

The next board game introduces the random narrative aspect, simulating real-world conditions to see what outcome would result. The rules and aesthetics of the game used as reference the 1995 game Catan[15] designed by Klaus Teuber, where space and limits were still being produced, with the addition of introducing event cards and characters, new aspects that influence the instructions on how the game is played. The game continues to initiate with the placement of hexagonal tiles representing different biomes, resources and configurations chosen by the player. This time, the tiles are placed one at a time, following the narrative established. Each player contributes to the development of the narrative, adding different elements to the story to explain the movements taken. The players are given a token to be placed on top of the tile, activating the action. As the game continues to play out, other pieces are introduced to the context; the connection, the structure and the narrative. The player places the character piece on the tile and defines it, a person, professional or even an animal. The storyline starts by identifying the narrative piece next to the character tile, creating the player's context. This is a reference to selecting what problem to solve, seen as part of the process of play. The structure piece represents a condition or a structure in which the player interacts, a bus, a public bench or a store. And finally, the connection piece allows the game to progress by ending the turn and following onto the next tile. The mechanism of the game was a result of the real-life experiences found in the city, a system that allowed events and unpredictability but was still overconstrained by the sequential instructions. A game focused on the exchange of resources as a way to negotiate not only the space created but highlighting the effects caused by reconfiguration the strategy taken when attempting to establish social integration. The space produced isn't a result of a set of instructions on how to interact, but it is free from instruction. Space is produced through any interaction without a sequential order, it is subjective to the individual.

15 Catan previously known as Settlers of Catan is a multiplayer board game designed by Klaus Teuber first published in 1995.

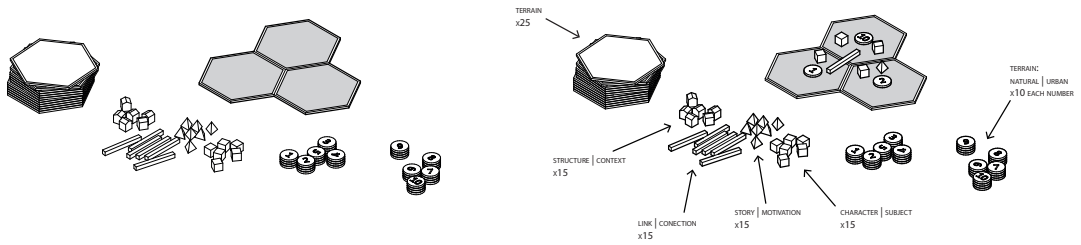


Fig. 13 Board game experiment #3 Storyline development. Source: Author.

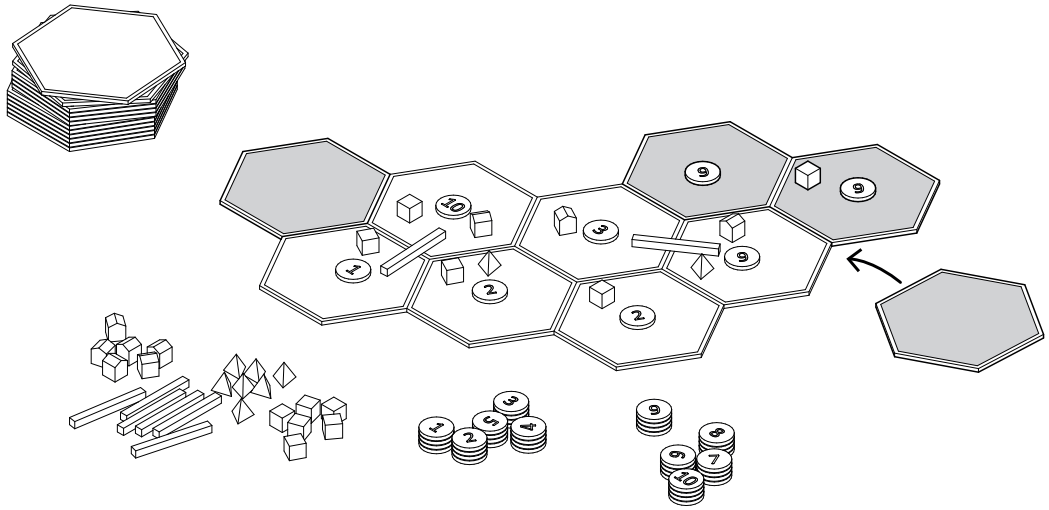


Fig. 14 Board game experiment #3 Creating an open-ended game. Source: Author.

The final experiment with board game's tried to play around with the idea of a subjective game where the players would establish the configuration, delegate functions to other players and establish the instructions according to the events. This game has as reference Debord's Theory of Dérive[16], where a group of people come together and investigate urban configurations. However, this game assigned roles for each player to investigate the city and come up with parameters that translate a specific event or object. The game's first character is the bard, an important role to create the initial narratives and delegate functions. Another character is the navigator responsible for analyzing the data and choosing different paths along the city to advance in the game. A collector of data and events would play an essential role in investigating the configuration and registering interesting interactions in the urban

16 Debord, Guy. ([1957] 2006). Theory of the Dérive. In Ken Knabb (Ed.), Situationist International Anthology (pp. 62-66). Berkley, CA: Bureau of Public Secrets.

configuration. Each role in the game produces unpredictable content as the crew interacts with the public space. The plot and narrative begins as part of the unique experience of each player, but at the end of the game as the group pieces together each experiences the story line changes into a random plot. The space produces content and the group brings pieces together to create a Frankenstein[17] storyline.



Fig. 15 Board game experiment #4 Recreating an urban role-playing game. Source: Author.

17 A sapient creature created by Victor Frankenstein featured in the 1818 novel written by the English author Mary Shelley.

The instructions and the results stimulate discussion on the urban space and the relationship between people and different configurations. It attempts to spotlight the different narratives, the movement, the data and the events that infinitely define public space. The game series speculates what actions to identify, either from agitation and movement, following instructions, or spontaneous interactions. The identification of these elements is what will define what and how space is being produced.

The game series brought a playful approach and freedom to create narratives that define a configuration, characters and the many stories. By further analyzing the game, it was realized that "space" would only be defined when people act in a way that defines that space. The public space hold a neutral definition, any one can change its definition temporarily to become whatever it needs to be. A grass area of a park can be a football field or a picnic area, so long if the people that interact in that space define it as such. If people act a different way, it transforms and redefines it into something different. Our actions have the power to continuously produce space wherever we go, regardless of the official definition of that space. In the 1974 book The Production of Space, Henri Lefebvre explains how humans differ from nature because of work and production. According to him, there is a distinction between nature and space. Nature is spontaneous where there is no conscience on where it grows or what to grow, it is a natural force of creation that does not produce, it only provides. Space, on the other hand, is a product of human action, specifically work. As social beings, humans produce space where they can perform their actions to satisfy their needs. The social space is a product of organized actions with an objective in mind to accomplish. It is where fresh actions occur and where a great diversity of knowledge is produced. Our social needs produce and define where our actions will take place ([1974](1991)).

By observing the surroundings and closely investigating the actions made in the public space, the city was now resembling a game, and by tapping into the spaces, it was unconsciously being defined and reconfigured by producing personal narratives and actions. Spatial definitions are constantly happening thus, reconfigurations are the constant in a massive equation of unpredictable action. Trying to relate this to architecture and how building spaces enable

these actions, first, there was a prerequisite to defining what tools are available to create these reconfiguring narratives. As someone who loves to create things manually, the first idea was to create a tool that could change the way we access and interact with the configuration. This tool creates action in public space, it is an excuse to interact with different elements while at the same time appropriating the space and change it to accommodate personal use. To some extent, the tool would be the link between the individual and space, and the manipulation of both creates data and helps define the space.

Reconfiguration as a tool for spatial definition

Interestingly, the manifest of Joan Littlewood and Cedric Price on The Fun Palace came across the investigation. It was an architectural masterpiece that was never built and was kept in the imagination of so many theorists and architects throughout the world for its innovative way of viewing the new possibilities and relationships that architecture could bring into society. A building that had no definition to its purpose, but at the same time, it could accommodate any and every activity as its definition came from its user. The history behind the conception of the building is quite interesting. During the early 60s', a post-war society was currently on a path for economic change. The government focused its attention on ordinary people, providing them with higher education to keep up with a competitive market that needed skilled workers. As jobs started to change, people with no skills became jobless and viewed themselves with a lot of free time. The government became frightened that this newfound leisure could turn into idleness and loitering. This conflictual scenario became the starter point for Joan Littlewood to develop an idea originating from her early days as an agitprop performer. Used by the communist party of the soviet union, agitprop was one of the main tools to propagate information and knowledge to the population. A group of artists, educators and politicians would arrive at a certain community and transform the main square into an urban performance that would spread the information necessary to learn and be better prepared to face the difficult challenges in 1920's Russia. Aside from the usual soviet nationalism propaganda of hard work and unity, the agitprop strategy was to give its people an

excuse to come together to have fun and enjoy the transformed public space. When the event fulfilled its purpose, the performers would pack up their things and move on to a different city, repeating the same thing. The ephemeral event redefined the public space and transformed the morale of the people receiving the benefits. In the 1960s, London Joan Littlewood saw an opportunity to use the same strategy of agitprop to create a space for performance where people could influence and transform the space. Cedric Price, the project's head architect, took Littlewood's idea and designed a building made of simple structures that could be integrated with other physical elements and cybernetics. The objective was to give the user the necessary tools to enable their activity, when finished, the space would be modified by another user and adapted to the needs of Its new user. In a way, the conditions in the public space are similar to the one proposed by Joan Littlewood and Cedric Price. The public space provides basic simple structures, and in most cities, wi-fi, and the transformation happens through the informal workers and performers of the street. A singer takes out their instrument and modifies the space to accommodate the speaker, its merchandise and a coin jar. The public space in that small area turns into a small auditorium, and the different interactions of that space change the current dynamic of the space. The public space being informally transformed to propagate information (Mathews, 2005).

The neutral structure is a tool for creating possibilities, reconfiguring the space to accommodate endless programs. It is a toy-like object that wanted to challenge its user to be creative and transform the space into imaginative utopic definitions. The Fun Palace and its methodological ideas influenced a generation of artists and architects by creating playful experimental opportunities, thus creating masterpieces in the field of architecture. As the configuration displayed the possibility of intervention, it became irresistible not to interact with the building. These events also present similarities with the current reality, not in architecture but in human behaviour, desire and culture to occupy and use public space to meet a necessity. The public space is where social energy is created, bringing people together that are naturally drawn towards the transformation of their environment.



Fig. 16 Elizaveta Kruglikova Agitprop educational poster against illiteracy. Source: Elizaveta Kruglikova.

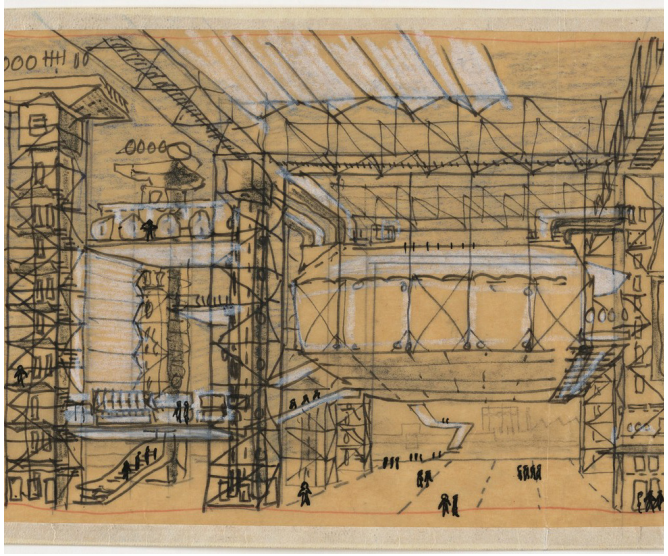


Fig. 17 Cedric Price Fun Palace sketch drawings on the dynamic spatial configurations.
Source: MoMA.

Moving forward with the research, the plan was to initially create a game as a tool to recreate the same goals intended with the Fun Palace. A neutral game resembling the structures of the Fun Palace that could playfully transform, through human interaction, the space it exists. To achieve this, initial parameters of the game were established intended to create a similar research approach as Cedric Price, adding also the references previously researched above. The first parameter of the game is the possibility for travel or displacement, following the Theory of Dérive the game presents a huge potential for investigating different spaces. By exploring the city, the game has the potential to experiment with different configurations and narratives, producing strong data for comparison when reproducing the game in different areas. Also, the game must be able to connect with any environment present in the city. Like the terminals in the Supersurface theory, the game is the device to access the space and produce action leading to a definition. This can also be associated with the complex cybernetic system of the Fun Palace designed to assist the user in the creation of its spatial configuration. The game is the connection between space and the individual in the public space. The next parameter is embedded into the action while connecting space to the individual. As Lefebvre's Production of Space suggests, the action produces the space and defines it accordingly. The game must produce situations, narratives, space and experience. It must define the public space and generate multiple possibilities through experimentation. Finally, the game must be able to

reconfigure, if one public space configuration enables multiple definitions, the game must provide evidence of these events. A reconfiguration tool created from the experimentation of the board game series propelling a new investigation of the space through play. To create a spatial definition by playing with the parameters, creating a process for experimentation, provoking action, stimulating fun, creativity, knowledge and collectivity in the public space.

Site of Interest

This device should stimulate actions regardless of where these actions will take place. A site-specific object doesn't seem to satisfy my curiosity about revealing different interaction possibilities in different areas. Like the theory of dérive, by playfully tracing a path through an urban context, investigating the different interactions made possible from the device would make a fascinating database to expand further. Since the Faculty of Fine Arts is located in Porto, this could be an interesting starting point, experimenting with different squares, neighbourhoods and streets. The collective aspect of the project would bring different perspectives from different locals that share the public spaces from Porto, registering their narratives into the device to then relocate to another area and repeat the process. But since the site of interest isn't the main study point of this project, what if it could travel to different locations? As a person who has lived in several countries, all my experiences are embedded in my memory and influence how I understand the city. What if the object could also absorb these experiences, could past narratives influence the current action in the public space? Through various experimentation and observation, anywhere could be the site of interest, as long as the dynamic stays true to its purpose.

4. THE PROCESS OF PLAY, INSTRUCTION AND EXPERIMENTATION

This chapter reflects on the benefits of using play as the main action for experimentation in the public space. The research continues to explore spatial definition through play by reflecting on the historical culture of play in society, knowledge through the process of play, outcomes resulting from rules and instructions to finally play and experiment with different reconfigurations.

Why Play?

Established that the public space is defined through human actions, the research continues to find this one action that allows multiple definitions in public space to happen. As the references mentioned above suggest a similarity between games and human behaviour in public space, the action unconsciously highlighted during the development of this dissertation is play. By associating games to the public space, play becomes the protagonist within the possible actions while approaching different themes raised during the research. If a public space is like a board game, one of the possible actions used to activate the game is play. The first questions that come to mind when establishing play as this action are: What is play? Why play? Why perform in the public space in a playful state? And how to use play to reconfigure spaces?— Play is a free action that enables free expression without recrimination, it is the action that creates narratives and different universes that escapes reality. It is the action that does not define human behaviour seriously, to play is to act subjectively according to one's emotions. To play is to choose a problem to tackle and experiment on the different answers obtained, there are no wrong answers in play and the results can be translated into the real world. But the best answer so far is that play is fun. It feels free to come up with activities that have no expected outcome, where you can connect into a ludic narrative and have no fear of failure. Human's cultural DNA suggests that play while in infancy helps in the learning process, how to live, to experiment, to analyze various objects individually or collectively creating amusement through discussions and interactions (Huizinga, 2003).

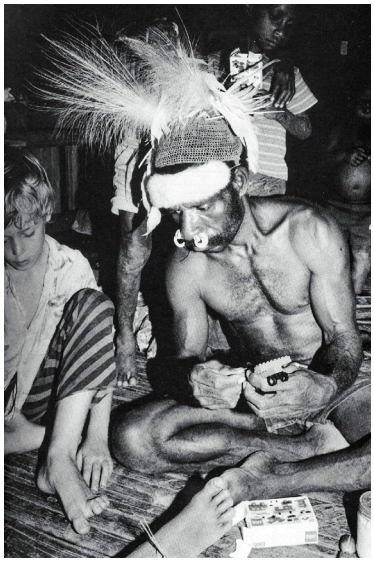


Fig. 18 New Guinean father playing with LEGO.
Source: Henry Wiencek.



Fig. 19 LEGO modular bricks capable of building whatever universe.
Source: Google Images.



Fig. 20 Star Wars original poster. Original utopic narrative that transformed the cinema.
Source: Tom Jung.

Through play, there are no judgements or a sense of ridicule from others; instead, it creates opportunities for joining social groups that give support to each other. Also, play enables the reconstruction of the space interacted, identifying and changing the elements found in a configuration and imagining different narratives while creating artifacts that translate the actions taken. In a real-world scenario, play is capable of breaking the seriousness of a situation and approaching the issue in a nonconventional way, experimenting with different paths that can better solve the problem.

Johan Huizinga, a Dutch historian and philosopher, describes in his book Homo Ludens how games are an essential part of human nature. He describes the importance of playing games as a learning process through young age where we develop skills to better understand and interact with our surroundings. Also, he believed that games were a part of human nature before culture was invented and that this action was used to create new objects, new ideas and even help establish a culture among the community. According to Huizinga, these guidelines and rules helped to develop ways of establishing communication with other individuals by creating a game that would be a base of information for associating objects with meaning. By playing the game of association, these images and meanings would enable humans to create languages that have roots in the notion of playing a game. Another theory discussed in the

book argues how humans developed a sense of achieving goals through achieving certain objectives of a game. Humans are naturally driven to perform actions, it is our essence as living creatures to act in any space either public or private. Through playing various games, we define what are the rules that we must obey to understand what actions must be used to complete certain objectives. Huizinga's argument is defined through actions focused on achieving goals. This theory is seen better in sports where players perform actions rooted in certain rules established competitively to achieve better results than their adversaries. By competing we develop a sense of competition within our community, using the obtained skills and abilities to compete and push us into facing more difficult tasks, thus contributing towards knowledge and evolution (Huizinga, 2003)[18].

The sense of competition comes from achieving objectives, problems that are elected to be faced where the solution comes from creating a methodological process. The more challenging the problem the more potential for knowledge can be gained by using play. These experimentations done to solve problems cause individuals to stimulate their creativity, to find innovative ways to search for knowledge to complete the task. In the case of this dissertation, the problem is understanding the various ways people define public space. The task is ambitious and difficult because of the infinite answers it generates over a period of time. Although it seems impossible, play contributes by creating a process of experimentation that stimulates creativity. By analyzing multiple paths towards the objective, the achievement of the goal becomes irrelevant, and the shift towards the process is evident. Mitchell Resnick states that creativity comes from tackling persistently the problems from various angles, the process of creativity in this case is to recreate as many ways possible human behaviours the define public space (Resnick, 2017). Richard Schecher argues that play borrows behaviours from previous lived contexts where the purpose is clear, transforming these behaviours to use them for no apparent reason. To analyze public space by using play, common behaviours seen in public and in play must be borrowed and used to recreate situations (Schechner, 2013). The

18 Huizinga, Johan. (2003). Homo Ludens: um estudo sobre o elemento lúdico da cultura. Lisboa, Portugal: EDIÇÕES 70. Free translation.

outcomes of these behaviours are observed, assessed and transformed into discussion that leads to knowledge. How do individuals' actions influence the shared space produced inside a society?

Most of Huizinga's theories are based on the individual actions made within society. His argument suggests how people throughout history have used a simple form of performance to develop a way of life that is human culture. In a way, to perform within a community is to perform in the public space. In other words, playing games in public spaces could help us understand and define our space. There is a cultural background to justify the need to state this urban game. As mentioned before, humans are accustomed to using the game as a method for developing the association of different elements, thus transforming them into knowledge (Huizinga, 2003; Resnick, 2017; Schechner, 2013). By employing playful research on play itself, when we start to perform in the public space, there could be associations between elements that help create guidelines on different possibilities of interactions. Huizinga's argument of historic evidence of using play for establishing culture, language and rules for competition sets a base of knowledge for building up more evidence on the importance of using play as a default action to better interact and reconfigure our spatial environment.

All through human evolution, knowledge has been passed on to the next generation from parents to their children. As children play, they use this knowledge and imitate certain behaviours to create ludic narratives and put into practice in a non-serious way what they've learnt. Play is the first action that we as infants start to use as a means to copy and learn from our parents. From these actions, we learn about our cultural backgrounds, our languages and means of communication as well as our parameters for enacting out the rules of the society we are born in. Play becomes an important part of a child's development where it starts to have a glimpse of how their community thinks, functions or communicates with each other. The educators Lev Vygotsky and Friedrich Fröbel both focus and theorize on the importance of play and how it affects our development in childhood. These educators, from different periods, both had similar ideas towards playing as an effective strategy for learning, each research

diverged into different approaches and conclusions. Vygotsky was a Soviet psychologist that argued his understanding of how playing is an algorithm inside our minds that creates different relationships between drama and the individual's environment. By interacting with daily routines, children would imitate those narratives, recreating their reality and adjusting them to fit a more ludic scenario to develop then situations and problems that needed to be solved. These ludic scenarios are explained by Vygotsky as excuses for an individual to act in a certain way, by imagining ludic situations that follow the need to solve fictitious problems, something that might have referenced the real world in which the individual lives. Is an excuse to interact within society to then develop skills, pushing the individual to create and experiment inside their culture (Del Río & Àlvarez, 2007)[19].

On the other hand, Friedrich Fröbel was a German pedagogue and the creator of kindergarten who acknowledged that play always follows the logic of its environment. The individual establishes a relationship with its community to then learn through its interactions. Also, by his beliefs in many theories regarding Homo Faber, humans shape their realities by creating and using tools, the most efficient way for an individual to develop his skills is through the manipulation of objects. Fröbel argues that there is extreme worth of an object while playing a narrative. The object had the essential task of stimulating the individual's creativity through problem-solving. An educational system suggests that experimentation through object handling, familiarizing with its processes could create conscience and awareness of the relationship between object and reality (Lilley, 1967). In other words, while manipulating objects, we learn by gaining experiences that serve as a database to analyze our finds, using that knowledge to create processes and experiments.

19 Álvarez, Amélia & del Río, Pablo. (2007). La imaginación y la creatividad en la infancia. In Grupo Amarillo de Diseño (Ed.), Escritos sobre arte y educación creativa de Lev S. Vtgotski (pp. 23-89). Madrid, España: Fundación Infancia y Aprendizaje. Free translation.



Fig. 21 Fröbel's gifts as part of the learning process by object manipulation and experimentation. Source: Wikipedia.

Playing with LEGO[20] was a huge passion of mine during childhood, this led to always trying to create unusual worlds through different objects and narratives. This Danish toy is widely used around the world by children and adults to create objects using modulated pieces. Although the LEGO pieces are modulated, given representing social standards, while playing and locking pieces together, the narratives along with the space were always conforming to the build process of the final object. As the story continues, the pieces start to come together and the narrative follows the scenario, changing the single pieces into an artifact result of the action. The rigid structure and self-explanatory instruction become the means for free action and imagination. Although it seems random, the actions of the manipulation of the pieces kept creating the utopic universe, changing initial instances to accommodate the problems that arose through the process. Also, the modulated pieces suggest to the player the mechanics of the game, the tacit instructions that help in the process of experimenting with various combinations resulting in innovative builds. Although not implicitly demonstrated, the way that each piece is placed is subjective to the individual, a different artifact pieced together with equal pieces. This can be viewed not as gratuitous randomness but instead as a result of trying to solve issues found along with the storyline, adapting to the situation. Play

20 Danish toy production company best known for the manufacture of Lego brand-toys.

provokes facing different challenges, induces the individual to tackle different problems and grow from the experience. The narrative is never uncontaminated, it is always influenced. An error-free environment that welcomes improvisation while evolving the thinking process. It is what created different narratives in public space. This is something seen in public space, as the interactions are happening, initial objectives and attempts face limitations of unforeseen events. While on neutral ground, the storyline is subject to the interference of events that change the outcome. Many interactions result in infinite possibilities in the way public space is defined. The space may present itself as a neutral ground, but differences in narratives result in differences in the challenges faced, each one solving different problems. While analyzing these parameters questions start to arise, why not bring play into this investigation of the city? Using play as an excuse for performing in the city, a free motive behind our actions to occupy the public space. A tool for experimenting that could create an algorithm that identifies different elements in a defined situation, while starting to identify different processes that could generate an infinity of outcomes.

The LEGO bricks for some reason brought to my attention because of the numerous object-building possibilities that could be constructed. It was understood that a toy with only one function was boring and that if the objective was to spend hours playing in my room, the toy needed to allow constant experimentation with the object-building process. Curiously, the fun wasn't in the final object constructed, instead, my playing was done while experimenting with the bricks. With each different combination of brick locking, came the discovery of different objects to build. Spaceships, cars, airplanes, etc. all made possible thanks to my curiosity and experimentation. When given a set of objects that you can manipulate, the only way that stimulates the creativity of an individual is by experimenting thus learning how and what to build. These methods were proven to be successful, institutionalized by the founders of Bauhaus School as an initial course for newcomer students that had to learn how to design by playing with their experimentation. Many renowned architects like Le Corbusier, Frank Lloyd Wright and Buckminster Fuller used Fröbels teachings as part of their project development process seen in their practices (Resnick, 2017).

Mitchel Resnick, a professor at MIT describes how play enables individuals to create a process for experimentation leading towards the invention of tools that improve the existing objects. He references the LEGO toy as an example using process and experimentation to build infinite different types of objects through a unique modulated system. Although it may seem like a toy for young people, he argues that LEGO should be a tool frequently used to create discussions in a professional environment. Resnick states that all ages should use play, that it should not be seen only as leisure but a different way of approaching the problems that emerge. By playing, we are continually familiarizing ourselves with a chosen problem; we study these problems carefully in a pressureless environment, reflecting positively on the negative results of that outcome, learning through the mistakes that happen to then search for better solutions that satisfy our problem. (Resnick, 2017).



Fig. 22 Play for all ages at the LEGO house. Source: Lego Images.

These arguments contribute to this dissertation, laying down a foundation that provides an excuse to act freely within the public space, to choose problems that occur as a result of the freedom given to build narratives that motivate behaviour, without the fear of social repression. To play in public space is to historically act according to ancient human traditions, each culture differing from how to play is done as we start to manipulate our surroundings

to accommodate the narrative, creating objects that assist our actions. Objects that allow different close manipulation for spatial reconfiguration, that somehow are redefined from the interactions that rule the environment. The proposed urban game starts as a free action in public space, players that choose to act in any public space and start to observe elements that can be used to their advantage. They start to locate the "Inputs and Outputs" of the map where they can overcome whatever problems they choose to solve. By using objects, not only will they build structures that define the space but also will allow the experimentation of the object, carefully studying the potential usage and maybe learning from reimagining different solutions for different problems. An urban game that starts like any other game that might have a similar initial strategy, to analyze and create strategies first to then familiarize by practicing with action. This is a lesson learnt from playing with LEGO, when faced with a lot of information the best thing is to imagine and design solutions that would help the player play, to use creativity and have fun.

Rules and instructions

Although play has its free spirit side where actions happen in a perfectly built scenario, as beings that follow the natural course of nature, to function we create laws and rules that govern our emotions and actions throughout the narrative. Even in free play, we tend to create our own rules to better understand the problems, to establish different processes of actions that have an objective to be solved while playing. It is a default action within all living beings on planet earth to create and follow rules. When the rule is not benefiting anymore, as creatures of evolution, we change the rules, reconfiguring the process so that the narrative can move on to better situations. Through rules, we find ourselves in an environment that presents a set of physical and social laws in which the individual must accept to function. Through restrictions, the boundaries are set so that creativity can flourish to take shape in many different ways. Each one of us finds creativity when given problems that limit the possibility for a standard default solution.

To create rules that enable the narrative, first, it is needed to establish what are the most common forms of play and what different functions are assessed in each style of play. Richard Schechner, a renowned professor at New York University, argues in his book Performance Studies that play is at the heart of any performance made by an individual. To better approach, the essence of play Schechner suggests a strategy that enables us to organize and structure play in seven functions that are revealed while playing:

1. Structure: How play will take place, what are the elements to be used and where it will play out?
2. Process: What will be the phases and development of the game to score a point, achieve an objective or just act according to the narrative?
3. Experience: What emotions and experiences are as a result of play? What are the connections between performer and observer and how can the environment produce experience to the player?
4. Function: What is the purpose of the game? Why play?
5. Evolutionary and individual development: What is the relationship between play and culture? How do humans learn through play?
6. Ideology: What are the political, social and personal values as a reflection while playing?
7. Frame: When does play begin and when does it end?

The first being the structure itself of a narrative. When we play, even when acting freely, we start to organize information in a coherent sequence of events as we perform the narrative. This can be seen better in sports, like football where we have a regulated amount of time defining a start and end of a match played out as a sequence of random events that build into a climax. While the game is happening, most of the actions are deemed as normal, they follow a set of rules and the game continues as it should. But as we start to incorporate emotions and tension, maybe from the losing side we start to see a fall in the structure and order, a fault for instance where a player loses his concentration to act emotionally against the rules.

Following structure comes developing processes and experiences. As said before, Resnick always seems to use play as the preferred method to create a process while playing. A process can be a sequence of methods used to achieve a goal. In football to score a goal, the process of achieving that goal would be to run and carry the ball with our feet, passing it to fellow team players and risking a shot at the target goal. The process is a series of trials and errors that happen when performing that action. And through these repetitive actions, experiences are gained, players start to learn the fragilities of the opposite team, exploiting them to score a goal more efficiently (Schechner, 2013).

Another interesting function appointed by Schechner is the reason behind the performance of play. Instead of defining the purpose of play as Huizinga did in his attempt to define the game in his book, Schechner instead asks several questions that reflect on how individuals and communities are affected through play? How do they promote growth, creativity and knowledge by action so familiar and simple? How do humans react when faced with myths, fantasies and different morals that can be a product of play? Questions that don't offer one straight answer but instead leave a blank space for the reader to reflect and stipulate a unique answer, using the restrictions created by the author to expand their knowledge and define their understanding of play. During my reflections on the questions raised by Schechner, answers started to formulate this dissertation. Even though play is subjective to the needs of the individual, rules are a product of play when enabling the narrative to continue its course. Even a well-structured and regulated game can present unpredictable events that might occur changing the outcomes of the performance. Play allows the narrative to adapt, it is a flexible action that allows change to accommodate new experiences. The rules in play are a set of understood regulations that players share and must obey, although when needed, players can sometimes reinterpret and bent the rules to adapt to a new narrative. To test this theory, a game with modulated pieces was created as a test subject where the objective was to interpret different events and create rules and instructions to build an artifact. During the game, different situations would reveal unpredictable events, and problem-solving would stimulate creativity to change the current path of the artifact-building process. The idea was

to try and interpret the rules out of the current narrative where the outcome of the game could enable a unique experience. The game's intention was to not allow the exact conclusion to play out twice, leading the end to reveal a surprising conclusion as a result of the player's creativity.

During the first semester at MADEP[21], it was suggested to research an interesting article[22] that narrates the writers' experiences with the event called Festival Scavengers. This event was founded by the British artist Joshua Sofaer, an artist that creates discussions on how to establish social collaboration and participation through performing arts. An event that has happened at least six times around the world, the one that most interests me is the 2006 San Francisco Museum of Modern Art Scavenger in San Francisco, United States. The reason behind the choice is how the game is described in an article that narrates meticulously the actions made by everyday people composed in a group that never had experience with performing arts before that experience.

The objective of the game was simple, to go and search throughout the city for objects listed on a list containing one hundred clues for the items that needed to be collected within a certain time limit. If a group finished the list of items before the other participants, the victors would be awarded the prize of four thousand dollars. All of the objects found by the participants would then be exposed at the SFMOMA as an exhibition on the individualities that become evident when interpreting an instruction.

Although the prize money would be enough motivation to participate, the exhibition as a result of the game would be the most interesting part of the game because it is a reflection on the outcome of the action. The author explains how the rules were established early on in the event of the scavenger hunt. The game started with a meeting at the SFMOMA[23], with all

21 Mestrado em Arte e Design para o Espaço Público. Translation: Master of Art and Design for the Public Space.

22 Caster, Kevin. (2006, October). Scavengers. Joshua Sofaer. https://www.joshuasofaer.com/2011/06/scavengers/.

23 San Francisco Museum of Modern Art.



Fig. 23 The results of the Scavenger Exhibition SFMoMA.
Source: Peter Dibdin.



Fig. 24 One rule, variouse interpretations.
Source: Bob Hsiang.

the competitors divided into groups of their choosing with the rules then explained. The time limits were established and the list of objects that are meant to be found in the city is given out. As the game started, it became clear to the participants in that group to establish another rule and create a process to become more efficient in the search for the items. At the end of the game, the team's strategy did not work. As the description of the game continued, several issues started to pop up that made the initial strategy inefficient. As the game progressed, the management of time was lost and now it was a free for all game that hoped to gather as many items as possible before the time limit. The rules were changing as the game was evolving to a more chaotic conclusion. In the end, the interpretations started to distance from the intention to be stretched into an interpretation made out of desperation to finish the game. As the exhibition started to take shape, we can see how the rules were bent and give a comic reaction to some of the items exposed. A fun experience that was made possible by setting rules on a game that sprawled into multiple different narratives with one common objective, to find the objects. Festival Scavengers was an event that gathered people from all different backgrounds to participate in a race where each group was given a list of clues to solve and gather all objects to then create an exhibit where the objects would be displayed for the public to see. In an interview, Sofaer said his interests behind the treasure hunt are to reflect on the contemporary production of art followed by questioning what makes something art?

By gathering the artifacts of the game, Sofaer takes the "rubbish" as art creating an exhibition at the museum. It also was an incredible way of creating excuses to play and move around the city, investigating different types of artifacts that give meaning to a specific rule or configuration. To see an interpretation of the object product from the rule through the eyes of the individual that gives an object meaning. It is an urban game that exhibits the experiences and interpretations that happened in the public space. An urban game that enables people to gain spatial awareness and knowledge through shared information.

The *Cata-vento*[24] project was a first attempt at MADEP to materialize the first impressions on spatial definition infused with some ideas regarding fun. While continuing to research spatial definition, fun was being used to create a process for the research as well as an excuse to play more with the project, to then start to implement some of the techniques learned from Mitchel Resnick into my methodology. So it was decided to build an object, something simple and modular that could be replicated throughout the city and that was self-explanatory sufficiently that people that saw the artifact could understand the process and offer to help construct or maybe replicate it. But the question was, what could be this object? The starting point of the design process sought to use Debord's approach to drift around the central part of Porto, to find something that could be made to represent the city through play and spatial definition.

Personal experiences in Porto lead to frustration when it came to understanding the unreliable weather. During the summer, sunshine and warm weather predominate the city. When in other seasons, fog, rain and wind seem to baffle the citizens trying to determine if they'll need an umbrella or not. Sometimes, Porto is an instant mix of good and bad weather all in one day. The day might start as sunny and all of a sudden it will rain for a few moments before it becomes cloudy or windy. The sun might come out to shine, but only for a few minutes cause right behind the sun comes the bad storm. Although it is unpredictable knowing what

24 Brazilian Portuguese word for windmill.

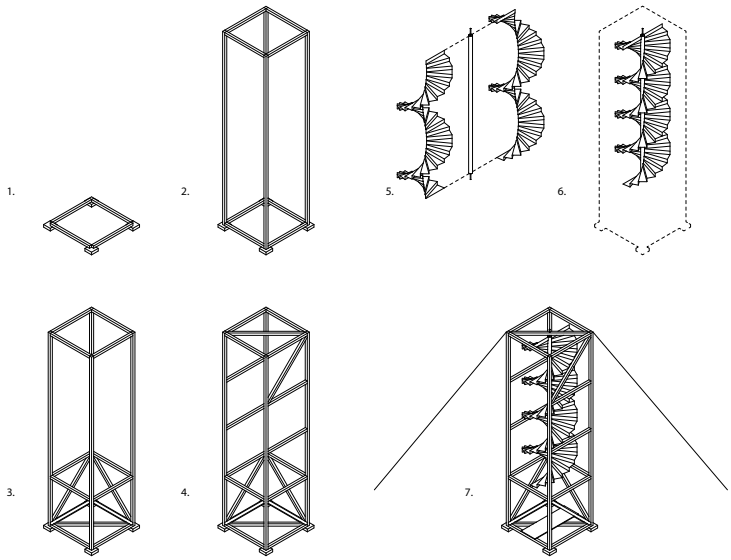


Fig. 25 Building design process of the Cata-vento. Source: Author.

to wear when going out for a walk, one of the most constant natural phenomena found most abundant in the city is wind. The wind is always present in the lives of Portuguese citizens. While crossing the Luís I Bridge, it was understood that wind was represented by so many elements around the city: the seagulls, the drying clothes, the broken umbrellas in the trash, the wind turbines that power the country, the windmills that produced flower and the boats and ship that represent Portuguese naval historical culture from the ages of discoveries. The wind was present in Portuguese culture and as this became clear to me, I decided to create a small windmill or Cata-vento in Brazilian Portuguese.

The first approach to this project was to begin by playing with anything related to wind. What would be the easiest way to build a windmill? The first object made was a paper windmill, to then start and research more on the typical windmills that helped Portuguese society survive throughout the years. After researching different designs the building process started through a small model and tested two different prototypes, the first resembling a more traditional windmill and the second a more modular windmill. Frobëls theories became more evident as the models began to take shape, the learning process was evident while continuing to evolve the design process and object manipulation. The methodology became more familiar continuing with the build, out of the two windmill types, the one that became more evident that



Fig. 26 Cata-vento model. Source: Author.

was easy to construct was the modular windmill. By designing a modular object, not only was the process creating a methodology, rules and instructions but also was adding the possibility for other people to learn to use and improve the design. Using the rules and reaching out to stimulate individual creativity. The modular structure in its building simplicity was a step forward to try and use play to build objects that reconfigure space. In a way, the object acted like a monopoly[25] board game with its original set of instructions and game mechanics with one exception: The player's given freedom to interpret and reinvent its own set of rules to play the game according to the player's wishes.

Individuality through instructive performance

There are unwritten rules and social conventions on how to behave in a certain public space. When entering a public square we evaluate how people are behaving and the actions they execute. Several pieces of information are being processed in a split second to understand what is considered to be normal to not be the one that sticks out. These unspoken rules condition our behaviour in public space, it limits people to do what others consider to be

25 Monopoly is a multiplayer economics-based game design by Lizzie Magie, Charles Darrow and published by Hasbro.

normal. If a person starts to behave differently, it is easy to spot the anomaly in public space. But what are the actions that result in similar behaviour? Do people follow the same rules in public space and is this the reason for the similar outcome? Or do people act differently to achieve the desired behaviour in public space?

When studying different games, the first approach is to understand the rules that allow the player to have an equal opportunity of winning against the other opponent. The written rules determine what actions can be taken to achieve victory. The idea is to experiment with instruction and objectives and speculate through a few exercises if standardized actions the results will be the same result?— Through Yoko Ono's book Grapefruit[26], we see an example of the conceptual instructional art used as a method for creating rules and results through different individualities. The book experiments with instructive narratives, imagination, interaction and performance. The written instructions are given, it is the same for everyone and although the performance might seem as if it would be the same, the outcome is subjective to its performer. Understanding that every person is different, the performance done causes unique outcomes. The game's narrative is open for interpretation. Not only experimenting with the results, but Yoko Ono proposes the reverse of the exercise, to give a result and see the input actions. During the 2020 exhibition in Serralves Porto, Yoko Ono's work experiments with the reverse of an instruction. She spreads around the city and the cultural center words and small phrases that suggest a result: breath, peace is power and open window. The idea is to give the result and expect subjective actions towards the result. If the word "breath" is the result the action can take several forms, meaning the literal action of airflow in and out of the lungs or a time needed to relax or rest. The actions are different but the goal, although subjective to interpretation, are the same for all.

26 Ono, Yoko. (2000). Grapefruit: A Book of Instructions and Drawings. London: Simon & Schuster LTD.



Fig. 27 Yoko Ono's instructions in the urban configuration. Source: Author



Fig. 28 Yoko Ono's instructions at Serralves. Source: Author.

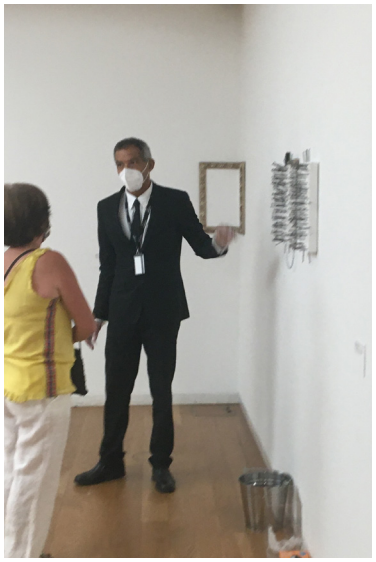
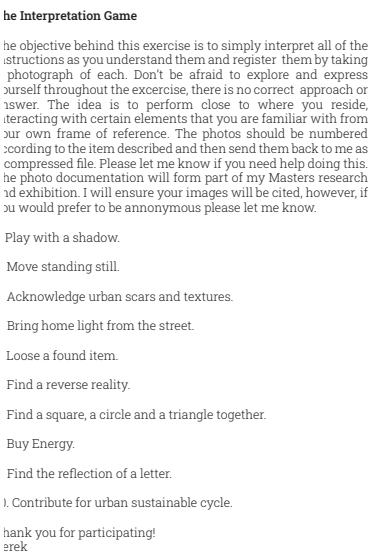


Fig. 29 Acting on the instructions at Serralves. Source: Author.

To better understand the subjectiveness of a performed instruction, the Interpretation Game was created. An experimental game designed during the covid-19 pandemic, where a list of descriptions were given to a player hinting through clues what elements of the public space to register by photograph or video. It was a straightforward process, read the instructions, interpret the instructions and register the element. The result seemed to be obvious, but as the players were to reflect on the clues, doubts clouded the judgment and the insecurities of what to register became more evident. This was a visible reaction from the players who discussed how the game presented itself as a dubious performance. What to look for wasn't really apparent although the description was clear. This was the main idea behind this exercise, to create multiple interpretations of the public space, to give a list of actions and see the various outcomes by the different players. As opposed to what is believed, rules can create various interactions in public space, going against the conditioning of a uniform behaviour. By giving a player a simple list of actions, an infinite amount of possibilities and combinations were suddenly possible. Rules don't necessarily guarantee uniformity and expected action, but it does give space for unpredictability and errors, which is fine. The game was to approach the seriousness of producing and interpreting rules and instructions in the public space by experimenting with a playful methodology. The paradox of this approach allowed the exercise to freely observe and investigate how instructions and rules interfere with the way people act



he Interpretation Game

he objective behind this exercise is to simply interpret all of the
istructions as you understand them and register them by taking
photograph of each. Don't be afraid to explore and express
ourself throughout the excercise, there is no correct approach or
nswer. The idea is to perform close to where you reside,
nteracting with certain elements that you are familiar with from
our own frame of reference. The photos should be numbered
cording to the item described and then send them back to me as
compressed file. Please let me know if you need help doing this.
he photo documentation will form part of my Masters research
d exhibition. I will ensure your images will be cited, however, if
ou would prefer to be annonymous please let me know.

Play with a shadow.

Move standing still.

Acknowledge urban scars and textures.

Bring home light from the street.

Loose a found item.

Find a reverse reality.

Find a square, a circle and a triangle together.

Buy Energy.

Find the reflection of a letter.

). Contribute for urban sustainable cycle.

hank you for participating!
erek

Fig. 30 The Interpretation Game instructions.
Source: Author.



Fig. 31 A few results samples of the game.
Participants: Brenda Moraes, Gabriela Manfredini and Rafaela Reis.
Source: Author.

in the city. The Interpretation Game would be another product designed to create a discussion where players would find and discuss different scenarios and narratives and compare the results with personal experiences. Every element of the city related to a city's law, rule, instruction and social convention would be interpreted and registered as part of the game. The conclusion was a discussion on the exercise as a way to evaluate the approach of the player towards their interpretation.

Another game created was the Texturas da Calçada[27] Game, a second attempt to play with rules in a different way. The first game experimented with the interpretation of a rule or instruction, this time the objective was to give one simple instruction and see the different outcomes as a result. The one instruction was to draw a pavement pattern on a blank paper. The motivation for that was to remember a simple aspect of public space in a time where Covid-19 had everyone locked away in their houses, not being able to access certain places of the city. As the game was sent to different players, the one rule started to motivate the players to experiment with their creativity. As the drawing started to appear, it was fun to see how a playful instruction produced a serious discussion about public space. The pavement patterns

27 Translation from Portuguese: Pavement Patterns.

often signal the aspect of a neighborhood, it signals to people what type of place they are currently in. Different streets possess a unique pavement, translating the aesthetics and cultural feel to the neighborhood. In Madrid for instance, the Barrio de las Letras have in their pavements poems and passages from famous authors transforming the space and giving the people a new experience only found in that area. In Porto, the pavement patterns at Aliados Avenue are visibly different from the traditional white stone found in other parts of the city. The idea was to explore free action of one instruction and bring into the lockdown a piece of the public space through drawing. The outcomes produced suggest that rules are subjective to the experience and characteristics of the person that interprets them. The interpretation of an instruction is subject to a person's experience, even though the action that follows the instruction suggests otherwise. In this case, the vague instructions of the game stimulated the player to search through different past experiences in the public space and register them through a drawing.

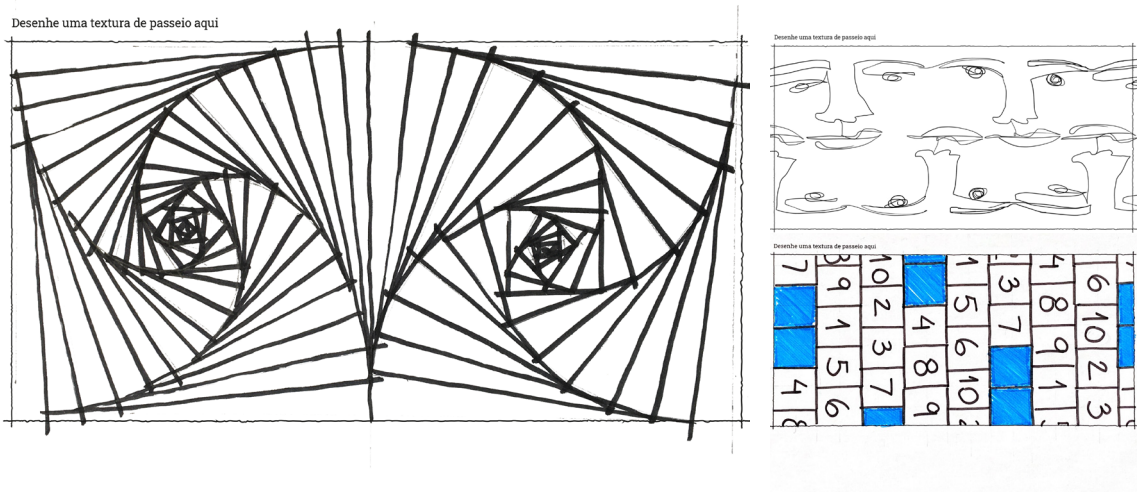


Fig. 32 Results of the sidewalk Pattern exercise. Participants: Rodrigo Brenner and Gabriela Manfredini. Source: Author.

The different outcomes from instructions are what define public space in various ways. Even in standardized public space rules, the actions that follow are done in different ways as a result of a person's personality. The definition of public space is not uniform, it varies and creates space for new actions, interpretations and reconfigurations. The rule: "Do not step on the grass!" might seem obvious but the way that the information will be processed and executed will be different for each person thus, no public space is the same. The constant interpretation of the rules and instructions is an attempt to map these events, to see in two ways human action is subjectively defined by the rules. The experimentation follows Yoko Ono's idea of creating an instructional performance in the space to analyze each subjectivity derived from the interpretation of a rule. And through these experiments, we create a stepping point towards a new spatial awareness where the rules create millions of definitions.

Experimenting with reconfiguration actions

As mentioned in the first part of the first chapter, several reconfigurations are happening through micro definitions as a result of an action in the public space. To map out these reconfigurations, a study case of one or two actions is necessary to stipulate the outcomes. Mitchel Resnick argues that a playful experiment creates parameters to familiarize with the developed process and thus the researcher continuously evolves the theories into different and more efficient results.

In the 1998 film Dark City[28], the plot begins by introducing the protagonist into a configuration during the night suggesting that the character has awoken unknown to the cause of him being there. As the movie progresses, the protagonist John Murdoch realizes that for some reason as the events continue to play out, time seems to stay still in an everlasting night. Although things seemed to look natural, there was something eerie and misplaced about the events in relationship with the configuration. For some reason, people of the city would

28 Proyas, Alex (Writer). (1998). Dark City [Motion Picture]. In Andrew & Proyas Mason, Alex (Producer). United States: New Line Cinema.

fall asleep for a while and wake up with new identities and new narrative backgrounds except for the protagonist. As Murdoch continues to investigate, it is soon discovered that extraterrestrials have taken humans to experiment on them. They would start by introducing people with new identities into a configuration and let the narrative play out while doing so, the extraterrestrials would take notes of those events and save them into an archive. Once the new identities were assigned, the city's configuration would be modified into new spaces ready to receive new interactions with the individuals that had their personalities changed. The city was a laboratory for experimentation where the human subjects would play out their identities while interacting with the city and the events established by the alien researchers. The process would repeat itself, seen by Murdoch which was somehow unaffected by the sleep induction administered, as the city would reconfigure its configuration so that new experiments could take place. For each different scenario, new data would be introduced into the existing information, and the aliens would learn more about the human race. The movie continues the story with the protagonist unravelling the plot and frees the test subjects of the alien control (Alex Proyas, DIrector). But the interesting theme of the movie personally was the constant experimentation of the elements. The individuals were vessels that did not change physical features only backgrounds and identities. They would have to interact with an urban configuration that was also constantly changing along with the events created by the aliens. The essential characteristics did not change, only the conditions that would generate powerful data to be analyzed.

In the case of The Fun Palace, Cedric Price, head architect of the project sought to create a truly innovative experience for the public through the materialization of a utopian building. The building was to give the users the possibility of creating new programs and spaces. But to do so in the late 60s, it seemed technology was still behind and couldn't follow Price's ideas. So in the many years that took to design the building, Cedric Price started to integrate architecture with newfound technology in cybernetics, game theory and computer technologies in a way that the building could learn to read its users and help transform the space. The one-man project became a collaboration of ideas and theories from experts in various subjects.

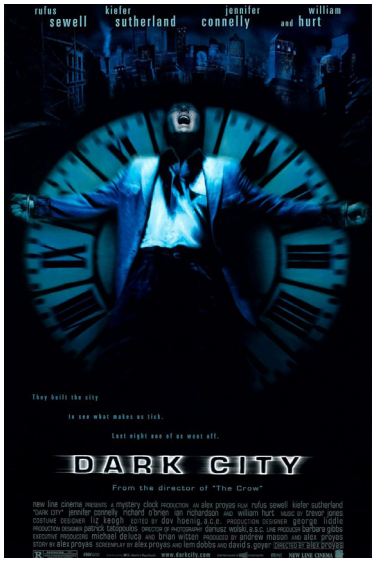


Fig. 33 Dark City Poster, 1998.
Source: Wikipedia.



Fig. 34 Discussions on the results of the experiments happening at the laboratory Dark City. Source: Empire.

The project was an ongoing design process and experimentation was key to achieve the objective. Not only that but the building itself was intended to be a laboratory for spatial experimentation, to inspire people to experiment with the spaces building new unseen configurations that are a result of creativity. A place intended so that the individual would create knowledge, interesting data that would be stored by the computers as experience to be accessed by future users. The whole concept of the building was playful experimentation and through that idea, this dissertation aspires to use this as the methodology to analyze future data as the interactions in public space start to occur (Mathews, 2007).

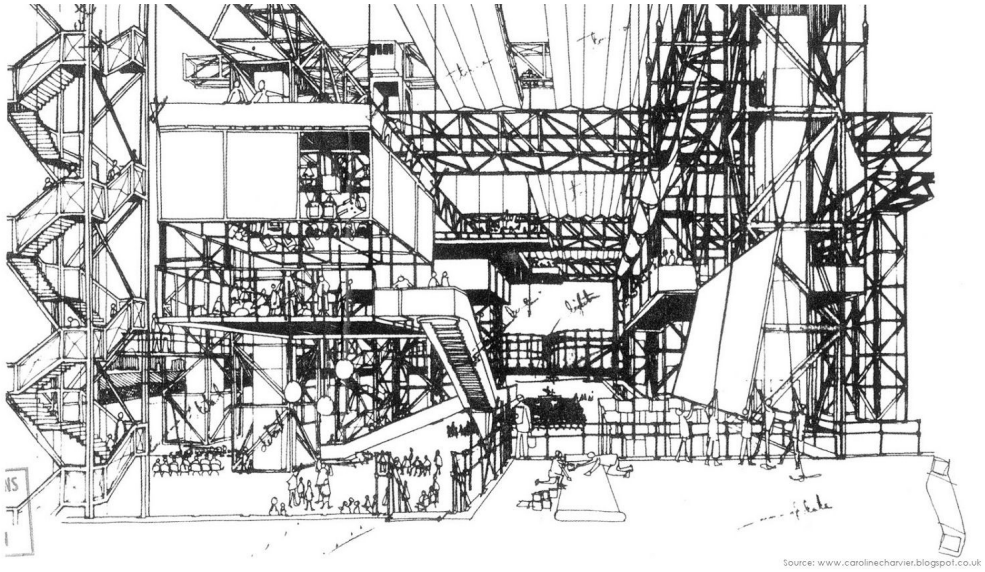


Fig. 35 Conceptual art of the Fun Palace showing the potentialities of spatial reconfiguration.
Source: Mooo Team.

The dissertation is a study case where the action play is experimented through different games that cause spatial appropriation and reconfiguration. The players of the game are given tasks, to investigate the city and create narratives raising data and experimenting with the interactions in public space. The games are the link that allows for the experimenting to happen, as the objectives have embedded rules and instructions leading to stimulate a certain action in the public space. As the individual plays out the game, each performance is to be different, being influenced by personality, configuration and events, changing the outcome of the game. Each game serves as experimentation to analyze each interaction and continues to evolve with the ideas behind the spatial definition. The manipulation of the game transforms the immediate configuration into a laboratory where the results create discussions about the city and how each individual interacts with the city. For each game played, the experience passes on through social interaction, object manipulation and the game's physical and virtual records. This dissertation is an ongoing experimentation, it has no end. Each game created can generate sufficient data to change the initial thought process but for now, the research brought this dissertation to experiment with two games that have similar objectives but approach the situation in different ways. Each experimentation leads to a discussion and it is by playing in the public space that the data created will be analyzed to create discussion.

5. RESEARCH AND DEVELOPMENT PROCESS

Game development stages

The initial game development process started with the first assignment at MADED[29] when challenged with the task of researching the public space. Each new project developed in class addressed the continuation of an idea that was previously seen in past projects. Plugging into Gaia was a project that contemplated the public space as a series of configurations that presented people with an opportunity for access to gain a certain benefit. Before the start of the masters in 2018, a final architecture project was presented with an idea of modular structures coming together to create different rooms that offered its builder a place that met a necessity. Although these modular spaces began to resemble structured cubes, the idea was that as the necessity grew, the user would continue to attach other modular structures to the existing one, expanding the room to accommodate a new program. The structure could hold infinite modular structures, one of the few limitations was the builder's ability to recreate spaces following the instructions of the modular structure. It was a project that proposed creating spaces, a new terminal to be accessed and used to gain a certain benefit. This idea has always been present through all the experiments of this dissertation.

As the experiments continued to evolve the idea of spatial interaction, appropriation, reconfiguration and definition, the project that is the basis for both games Restrictive Drawing and The Reconfiguration Game sought out to imagine the city as a Urban Board Game. Similar to the Monopoly game, the initial rules of the game were to translate different elements found in the city and reimagine them into something part of the game. As an example, most movements done in the city are controlled by signs, traffic lights, pavements, etc. In the Urban Board Game project, movement is restricted through dice thrown each turn by a different player. Each number corresponds to the amount of movement allowed. Another element

29 Mestrado em Arte e Design para o Espaço Público. Translation: Master of Art and Design for the Public Space.

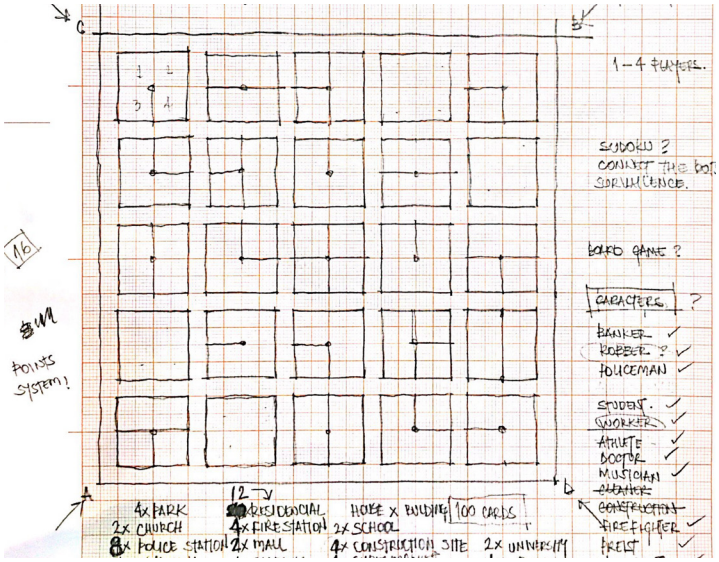


Fig. 36 Preliminary drawings on the Urban Board Game. Source: Author.

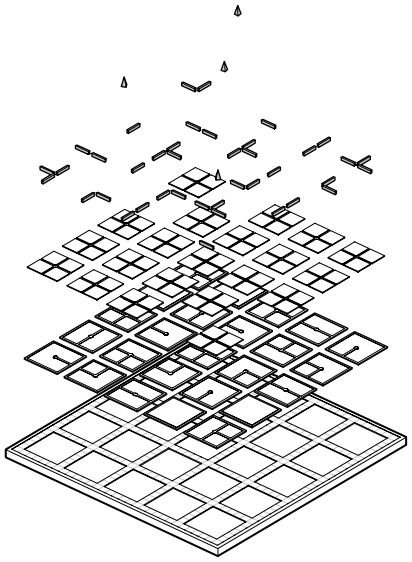


Fig. 37 The board game devided into different secctions: Street, Blocks, Buildings, Barriers and Characters. Source: Author.

translated is space, in most cities public and private spaces have different rules of access. While public spaces like stores, libraries, museums, parks, etc., have some freedom in who can access these spaces, private spaces like residential, corporate, government, etc. buildings have more restrictive access to the general people. Different elements found in the city were analyzed and transformed into a rule that corresponded to a certain reality that could be part of the game. As the development continued, the game started to take shape as extremely controlled and ruled. This dissertation attempts to look for the unexpected and the unique characteristics found in public space, in contradiction to what was occurring in the development phase. The issue was trying to control every possible outcome of the game through rules and this was a problem. Why was there a necessity to control every interaction? What are the rules in public spaces that conform to people's actions? Are cities viewed the same way by different people? — These few questions were essential to shift the project and focus on the social aspect of the game to reinterpret the rules and see the subjective outcome. The discussion now was about rules in a public space from the perspective of four players. The main theme was still on how rules affected their lives individually. But the Urban Board Game now became an excuse to come together and talk about the city, to share different experiences and analyze how the rules were affecting the interactions in public space. By laying a board game on the table, the discussions now created a new set of rules as players shared how they saw and understood

the city. Then as the game progressed, create a new set of rules that will only be played once. As the game is over and the next player starts the round, the rules are to be changed again transforming the object board game into a neutral place. Anything can be materialized through the narrative of the game, any rules could be decided as a consequence of the narrative.

A few contributions were essential to understanding the relationship between social behaviour and public space rules. Each person has a way of interpreting these rules, reacting accordingly to what works for them. This is what contributes to the infinite amount of spatial definitions that happens in one urban configuration. Every individual creates an interaction that is a direct interpretation of the rules. No person sits on the bench of a park the same way or for the same reason as the next person. If they repeat a rule, many unpredictable causes will change the definition, caused either for the difference of personality or an event that changes the way a bench is seen at that moment. Four players agreed to sit and talk about this new game where the reinterpretation of urban elements helped create the rules of the game. The first player talked about the differences between cities that present the same configurations but culturally transform the experience into something new and desirable. The game's rules were to find similarities and differences between Porto in Portugal and Rio de Janeiro in Brazil through a personal perspective, pointing out experiences that made each city unique. The second player focused on the violent aspect of the city through segregation, inequality and lack of care from the government's end. The cities that were discussed were São Paulo and Rio de Janeiro, raising different types of restrictive architecture that contributed to a more violent city. The player explained how the city was viewed from a personal perspective, remembering how to live in a society that is totally consumed by fear. The rules were to identify and translate into the game systems that oppress, that control and condition the access towards citizen life. The third player spoke about general women in the city, how different women see the city, how society expects women to behave in public space and what are the dangers that women face daily in the city.

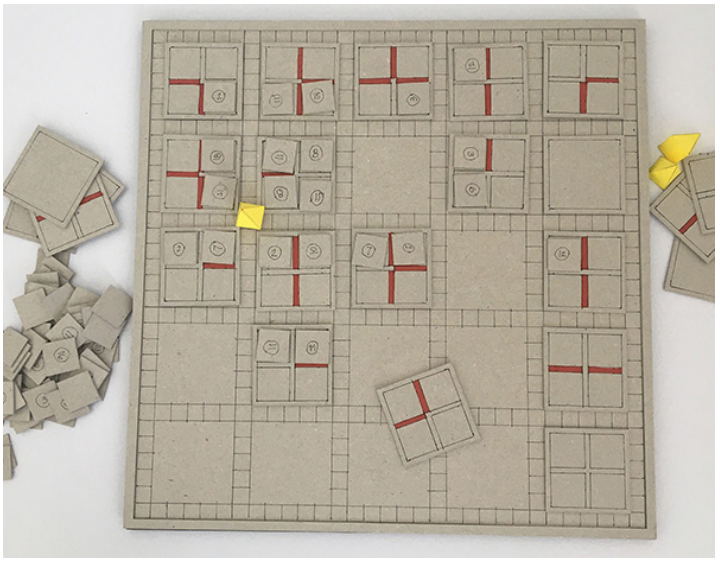


Fig. 38 A model of the board game. The games pieces are free to be reconfigured for each game played. At the end the game shuffles the different elements to create a randomness to the configuration. Source: Author.

Although the game began by searching for a rule to play, this game turned out to be a lesson on sexism, prejudice and inequality. Finally, the fourth and last player tried to play the game by creating a narrative found in different parts of the public space. By walking through different places and taking notes, the rules of the game were to enjoy the scenery and not worry about the game, the rule was to not play the game and enjoy the company.

These board game's evolved the initial thought of trying to always create elaborating rules to meticulously translate every element found into a mechanism of the game. Instead, by playing the game it was understood that the game was better played with fewer restrictions. A game with lots of restrictions limits the action into a mimetic performance, everyone does the same thing therefore the game creates predictable results. But by eliminating the need to create a rule for everything and leaving space for a ludic interpretation, the game becomes unpredictable, the outcomes can be anything. This is the precursor idea that motivated the next steps of the game's development. To experiment with these two ideas of extreme rigid instructions versus tacit ambiguous narrative and see how public space is created through these two types of interaction. The game entitled Restrictive Drawing started as an exercise meant to be played by following the literal rule. The game entitled The Reconfiguration game embedded the rules into modular wooden pieces that suggest to the player a way of playing

the game. Both games are fed in with information and instructions, to be played with and then to end by analyzing the outcomes. It is in the various unique outcomes where the essence lies, directing the research to attempt to answer the question of how do people redefine public space by reconfiguration through the act of play?

Urban Board Game Participants: Derek Orlandi, Claire Sivier, Letícia Poyares, Lucas Schuwab, Tabea Wald.

RESTRICTIVE DRAWING

The Restrictive Drawing was a small exercise that tried to collect individual experience by playing a simple game of instructions in the public space. By performing the rules of the game to the letter, certain individual aspects of the performer take over, transforming the experience of the movement unique to each performance. With one rule to follow, the game has multiple outcomes, configurations, movements and spatial definitions. The project concept started while observing certain mimetic behaviours made by people driven to recreate certain patterns[30] or structures in the public space. Without even knowing, people are constantly reconfiguring and redefining space through these mimetic behaviours and through these actions, an attempt to recreate this behaviour. A simple exercise could help map the unintentional behavioural inconsistencies that can reconfigure and transform the public space by playing in the public space. The initial attempt to experiment with the theories on public definition through interaction, these questions follow the initial argument on how space is redefined through play? How to use the process of play seen previously to map how we use and redefine the public space? Why play in public space? — Questions that assist the research in identifying the variances in the macro scale while focusing on the micro-actions that define an experience in the public space. It is the experience of having fun resulting from play that transforms into a discussion of the seriousness of the production of the space through actions. The game is the means to promote discussion, it is an excuse to interact and define through reconfiguration their space.

The chosen location to experiment with this exercise goes beyond the selection of a city or public space. It is about choosing a place that enables *ludicity*[31], where things happen because of the opportunities that present itself to the individual. Utilizing the public space for leisure

30 Through observation it was noticed that people tend to appropriate certain behavioural patterns from other references while in public space. An example could be seen at the Jardim do Morro in Vila Nova de Gaia. As people sit and enjoy the view of the historical city of Porto, they tend to understand other possible dynamics of that public space. If a group is listening to music and having a picnic while doing so, another group seeing this might understand the logic and behave similarly to what others are doing. It's not an imitation of the behaviour but a similar approach to the pattern that emerges in public space.

31 Word play joining Ludic and City together to produce Ludicity. Ludic meaning the spontaneous and undirected playfulness and city being the location on where may happen.

without any specific usage or knowledge on how to be in that configuration. Playing with spaces that induces the exploration of different paths that drift from one location to another, producing experiences to share in each game played. For now, the games were played in the city of Porto. Although the initial development of the concept visioned the performance along the beaches of Porto and Matosinhos, the idea continued to grow according to the ongoing research based on the theoretical references. The project sought to find public spaces around the city that had relevant significance according to events, discussions, and individual objectives, putting the game into action and creating a unique experience by reconfiguration. The game entitled Restrictive Drawing consists of a drawing in any vertical or horizontal surface of the city, a first X is drawn followed by a line that initiates from the center of the X that measures ten paces in any direction away from the first mark. As the count finishes, another X is drawn to mark the end of the game. A simple ruled drawing that has fixed dimensions but is only defined according to the performer. There is no correct length within the instructions of ten paces, the outcomes are established after each individual concludes the game's objectives.



Fig. 39 The Restrictive Drawing being played at the Matosinhos beach. Source: Author.

The materials used to put the game into action are defined as any object that can be handled, leaving a temporary mark on the surface. By creating an ephemeral event, it is preferred the drawing to be temporary as well, leaving out any practices that have an aggressive stance towards the city, such as obscene graffiti. It is suggested that the participant use a stick, a piece of chalk or any other material that enables the space to take other definitions as soon as the game is over. And with these objects, the next step is to interact with the public space by performing the instructions. The game was conceptualized and first executed to experiment and research how different social-spatial interactions occur in the public space causing temporary reconfigurations and redefinitions of the space. And through the act of play as an excuse for action in the public space, simple experimentations were done individually and as a collective to demonstrate spatial flexibility and redefinition towards immediate local necessities. After the individual session, the next step was to invite more people to play the game.



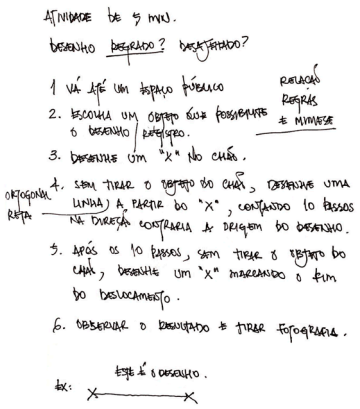


Fig. 40 The simple rules of the game. Draw an "X", followed by a line ten passes longand finishing off with another "X". Source: Author.

A total of five people volunteered to play the game, each one bringing new, unexpected perspectives on the outcome. The first player is an artist and architect, creating art based on observation and reflection of minimal elements, details and behaviours in public space. The second player is a fashion designer and public space artist. The artistic background of the player focuses on the creation of games that are sometimes performances putting into evidence to reflect about the social alienation of a determined urban context. The third player is an architect and public space artist. The most recent works from the player are based on recreating and distorting urban patterns, reforging the existing reality into unseen perspectives. The fourth player is a social scientist and a study expert on human society and social relationships. Finally the fifth player is a graphic designer and a public space artist. A few of the playey's practices include creating visual content to communicate ideas and content. As the game was played individually, many different environments and social interactions happened during the performance that changed how the game was played, thus providing data for an interesting discussion.

Expanding further on creating the proposed game, the initial thoughts and ideas took place during several walks along the shores of Porto and Matosinhos. Through observation of local spatial context, it was noticed a sequence of piled stones lined up along the beach boardwalk. Each stone pile had its characteristics despite the same initial assembly instructions to pile and balance the next stone upwards. As the game's objective seemed simple enough, people passing by that appreciated the stones started to imitate the action and replicate the same instructions, only adding their touch to their design. As the replications continued to occur, an idea developed to try and replicate the same actions observed to reconfigure space through a simple structured game that allows each individual to express their individuality, creating unique experiences in the public space.

Although the game started as a simple exercise of action, observation, and discussion, other theories were put into practice to realize the conditions and objectives observed during these investigations. A mix of Guy Debord's Theory of the Dérive ([1957] 2006, p.62-66) with Henri

Lefebvre's The Production of Space ([1974] 1991) started to formulate theories that gave me clues on what was the overall objective of these observations in public space. Debord's theories suggest playing an urban game of information gathering through spatial drifts into different areas of the city, thus creating a data bank that would, later on, be used as part of a discussion of the city. Lefebvre's arguments add other views on human behaviour towards urban spaces, where humans constantly produce the space that will be redefined to better accommodate their needs. Through games of drifting and observation, the task was to find ways to redefine and produce reconfigurations in public space. As the design of the exercise continued, another interesting fact became more evident. If the rules of the game are simple enough and if the aesthetics of exercise are pleasing, people will eventually try to imitate what others have done. As René Girard's Mimetic Theory arguments explain, people are most likely to base their desires on other people's desires. As collective beings, humans tend to behave publicly according to what others think is acceptable. If someone does something interesting in a public space, people tend to follow those actions, mimicking their understanding (2013). In a way, a person might think, the pile of stones is aesthetically appealing so why not try and remake the same exercise? The desire to repeat the game Stacking of the Rocks reinforces the idea that public space allows interactions to be interpreted and appropriated into a similar unique definition. A person looks at the rocks stacked along the beach and desires to create a similar artifact. That person then appropriates the space and the technique used to achieve said artifact. Although the product of the interaction seems to be the same as the original, the process and methodology is subjective to the individual. Therefore, several artifacts lined along the coast might have similar intentions and aesthetics, but they are different and unique.

And even though the rules are quite self-explanatory, the objects are different. The last theoretical reference used was Yoko Ono's work on performative instruction. Her book Grapefruit is filled with different experimentations regarding instructions and how, despite the image of rigid action, free creativity takes over as people find individual ways of recreating the performative instructions giving character to the action (2000).



Fig. 41 Stacking of the rocks played by unknown player by the beach. Source: Author.



Fig. 42 Stacking of the rocks played on the rocks closer to the ocean by unknown player. Source: Author.

After establishing the observations and ideas cross-referencing them with a theoretical foundation, the program of the exercise became clear. A performance in a public space begins with a set of rules to be done individually or in a group to produce space by reconfiguring it through drawings. During the execution of the game, the goal is to observe different behaviours, observe the inconsistent creative individualities found through different personalities, and analyze the audience's behaviour. Following the practical phase of the game, the execution of the game starts with the first talk with a participant, where the rules are explained without revealing the real objectives of the exercise. The less a participant knows at the beginning of the game, the better data will be collected for a final discussion. The participants agree on a place to meet and start playing the game, preferably a public space with abundant surfaces to explore. During the experiments that happened, the participants played the game at the beach in Matosinhos, Parque de São Roque in Porto, Praça Cívica and Jardim General Torres in Vila Nova de Gaia.



Fig. 43 Restrictive Drawing being played by the beach. Source: Author.



Fig. 44 The games loophole allowed for improvisations. The players creativity attemped to create a shape with the game. Source: Author.

The first game played on the beach of Matosinhos took the rules and exploited its simplicity to replicate the game in different directions of the surface. It was never specified in the rules that a participant could continue to play the game connecting the end of the drawing with its beginning. It never occurred in the original proposition of this possibility, and the outcome of the game was an attempt to draw a square with the rules. Interestingly after the game ended, as the discussion of the game was happening, a girl observing our game came over and, without asking, started to interact with the drawing. Even though the rules weren't explained, she understood the logic behind the drawing and started to redesign her own game. An unexpected outcome came while the ocean's tide level rose, erasing the drawing. An ephemeral event that restored the space to its default state, possibly allowing another game to be played. This event reinforces the idea of a public space having a neutral definition. As people interact and define the configuration, the time period of a definition is determined by the individual that is acting upon the space. As the interaction ends, so does the definition and like the waves erasing the drawings, the space becomes neutral again. This is an event that happens infinitely, space is subject to return to its normal neutral state until a new activation starts the cycle again.



Fig. 45 An unknown player contributed with her interpretation of the game. She appropriated the game and made it her own. Source: Author.



Fig. 46 The ocean's tide rose and errased the drawings, resetting the configuration for another definition. Source: Author.

The second game also presented unforeseen results. At the São Roque Park, the game was performed on a rigid dirt surface with a lot of texture that influenced the way the lines were drawn. But even then, what was truly interesting was the execution of the game, the way the participant was using its body to draw the line. Her personality was embedded into her action that resulted in the aesthetic of her final drawing as the participant tried to draw the line as straight as possible without having the interference of the texture. The conclusion of the game also had an unexpected external contribution, a small child riding a tricycle used the line as a circuit to ride around in laps, probably pretending to be a race car on a track. It was interesting to see the different interactions that were happening with just a simple drawing.

The games played in Vila Nova de Gaia followed similar but curious results compared to the game at the São Roque Park. The game played at Praça Cívica showed difficulties in recreating the drawing on a surface with a well-defined stone paving texture that dictated the direction of the chalk during the performance. The dark-coloured surface was a pattern not easy to ignore, it influenced the action and slowly conformed the drawing to follow the cracks and lines of the pattern of the pavement. The pink chalk line did not accentuate the drawing but instead got swallowed by the city configuration, making the result barely visible. This game's results addressed the relationship between human action within a spatial configuration and

how one attempts to influence the other. The following game was marked by the participant's personality, an almost shy characteristic person who played the game and counted ten paces within a short distance, causing the drawing to be small and timid. On the other hand, the last participant showed a different approach to define the ten paces necessary to complete the game. Using the modulated patterns of the pavement, a set of ten squares equaled ten paces. When performing the game, the steps used to draw the line didn't enter into consideration because the measurement was done through a pattern of the surface. The analysis of these last two games shows how a group of people following the same instructions tend to demonstrate different action outcomes, resulting in different spatial definitions and reconfigurations. The input is clear, and the instructions are simple, "Draw a line in public space.", but the outcome is an unconscious tacit action that vandalizes the elements of the situation, reconfiguring them to reveal the unpredictability.



Fig. 47 The game's rules being executed in different body movements according to the players characteristics. Source: Author.



Fig. 48 The influence of the city's elements such as patterns and textures that change the way the game is played. Source: Author.



Fig. 49 The individuals personality was translated through the game. Source: Author.



Fig. 50 The player altered the measurment unit, changing the rules of the game. Source: Author.

An example of this is Joshua Sofaer's Scavenger Hunt game, the input instructions were clear, a list of clues that suggests various items to be gathered and exhibited at the MOMASF[32]. The outcome of the exhibition were the several interpretations that occurred throughout the groups competing for the prize. Although each group received the same set of instructions, the interpretations were different, unpredictable choices were made and the result was a reconfiguration of a situation to accommodate the desired object as a solution for a clue.

Every game played created experiences that demonstrated how the definition of space is constantly being reconfigured through simple actions. Reconfiguration was happening from the individual's creativity towards the game, even though a simple line is drawn in the public space, the current spatial behaviour is noticeably changed. Of course, there were many challenges in the game's design process, having to evaluate what would be an acceptable game that could bring the most evidence towards my arguments. Dealing with people can be a complex task, scheduling a meeting that will not conflict with other responsibilities or even trying to explain the rules on how to play a game where the objectives aren't clear to the participant. All in all, even with the difficulties, the game was played successfully. Experiences

32 MOMASF. Museum of Modern Art San Francisco.

were made, and new parameters were established to try and experiment with the results and see if other games could also try and restate the argument of the investigation through different ways play in the public space could result in spatial reconfiguration and redefinition.

Participants: Derek Orlandi, Ana Willerding, Gabriella Manfredini, Luiz Felipe Brizante, Natalia Panis, and Clarisse Pinto.

THE RECONFIGURATION GAME

The Reconfiguration Game attempts to appropriate immediate public space and stimulate its reconfiguration through a set of modular wooden pieces. Modularity is a concept explored in past and contemporary games, especially the ones with an open-narrative structure that allow for free play and creative exploration. It is an attempt to scale down the ideas behind Littlewood and Price's Fun Palace conceptual building, add Debord's possibility for free drift throughout the urban configuration, following Ono's tacit instructions interpreted by the player to finally learn and create experiences as a result of the game. This exercise aspires to create an urban artifact following the rules and instructions of an event or spatial configuration and produce an action that defines the public space.

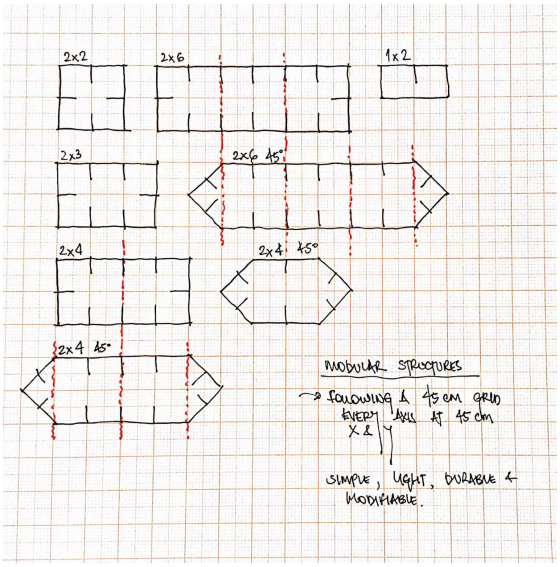


Fig. 51 Embedding the rules into the modular pieces. Source: Author.

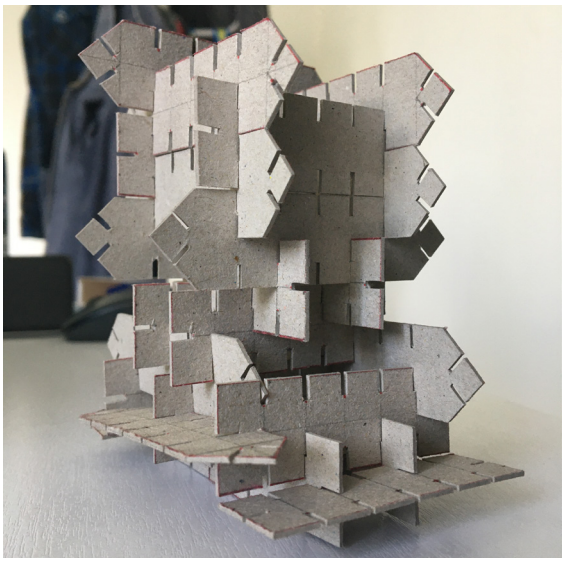


Fig. 52 First experiments with the urban artifact. Source: Author.

The development of the game started in Porto, after the Restrictive Drawing game series. Unlike the Restrictive Drawing game, where the objective was to understand individual definitions caused by dictated rules, instructions and conditions, this game proposes the concealment of the rules to study the tacit deviation of the open-ended game, creating various spatial definitions. It is an attempt to answer the following questions: How do people interpret the

rules found in public space, and how do they exploit the loopholes[33] creating new narratives that translate current events or configurations?—As people appropriate the public space, they transform it to meet a necessity, they establish a space for interaction and modify the spatial parameters in which they exist. The game is experimentation, it is the means to create a laboratory of spatial reconfigurations revealing the different narratives and rules created within the established law. Continuing with the stacking of the rocks as a reference, the reconfiguration game sought to recreate the same conditions that allowed the stacking game to exist. By suggesting a playful exercise, the player would first choose a location for the game to happen. After a brief instruction of the game, the player would recreate a unique artifact that translates a personal interpretation of an event, urban element or utopian narrative. The game has no time limit to start or finish, the final artifact determined may also last according to the player. The game is a free environment for reconfiguration, it produces anomalies in the conventional behaviour opening for unintentional events in the public space.

The game's development phase started by studying and understanding different non-explanatory games resembling the reference that allows the player to understand the game process immediately and, as a consequence, begin to interact with it. The researched references were toys such as LEGO, Matador, K'Nex, Puzzles, etc., which present hidden instructions to build objects. These toys stimulate the construction of objects through modular pieces with embedded instructions. The design inspiration suggested creating a modular piece that resembled these toys to experiment with the different instruction possibilities. Mitchel Resnick often suggests that the LEGO pieces are the enabler tool used to fulfill the individual's desired final object. When building with the modular blocks, the pieces fit together by a friction based design. As the player experiments with these fittings, the learning process pushes towards the building process that is fueled by a ludic narrative. The desired final artifact imagined in the beginning is what stimulates the player to play with the objects (Resnick, 2017).

33 The tacit instructions that are undeclared at the beginning of the game can sometimes be interpreted or even created by the player unintentionally. These loopholes are like cheats, secrets or easter eggs, but it is in the player's capacity to create and develop these possibilities outside the original instructions.



Fig. 53 Cutting the piece as a way of imprinting the rules on to the game set. Source: Author.

After a quick sketch on graph paper, it was established that the pieces would follow a forty-five-centimetre modular grid. This number refers to the various attempts to create a manual of ergonomic measurements by architects such as Ernst Neufert[34] and Le Corbusier[35]. Their efforts to create a scale of proportions lead to different standardized manuals for architects to design comfortable furniture and architectural spaces. By following the forty-five grid system, the game would allow the construction of utopic artifacts and familiar vernacular objects such as chairs and tables. One piece of the game would measure twenty-two and a half centimetres, and by adding another piece to the set, the measurement would match the forty-five grid. To better understand the game rules, the design process followed with the construction of the pieces on a smaller scale. The cardboard pieces would simulate a series of experiments that identify the process, revealing the system's potentialities. After a few adjustments, the concealed instructions were determined, and the next step would be the fabrication of the pieces. The primary material for the game is plywood, where the game instructions are represented as the notches cut out of the pieces to create the different fittings. The modulated pieces could be replicated infinitely, but after a carefully calculated design, a single sheet of

34 Ernst Neufert was a German architect known as a member of various standardization organizations.

35 Charles-Édouard Jeanneret, known as Le Corbusier was a Swiss-French architect and one of the pioneers in what is now regarded as modern architecture.

plywood fifteen millimetres thick managed to produce twenty pieces. The final step was to use the pieces and play in the public space.

As mentioned before, the game's objective is to appropriate public space and create reconfigurations. Nevertheless, the game is initiated before the interactions occur. As the players gather for an initial discussion, the subject is to suggest locations specific to a theme that will create a narrative. The city is mapped out through the discussion, and the artifacts are determined by the specific events or configurations of that period. By discussing the city, the player is induced to think about its space and understand what elements can benefit the artifact. In Guy Debord's Theory of Dérive, the proposed urban game is all about investigating the city combined with an aftermath discussion. By entering an awareness state during a stroll around the city, people discover different events and contexts unnoticed before ([1957] 2006, p.62-66). The game's key is the awareness state in which the action is done combined with the record generated, and it is what the reconfiguration game intends to stimulate for the game's starting point. When the player understands where the game shows potentialities, the results show a wider variety of outcomes.

As the location becomes evident, the game shifts toward spatial appropriation and artifact building stage. An appropriation of the public space is a process that follows the investigation, by analyzing its configuration, the player chooses what elements to borrow and allows the individual interaction to transpire temporarily. In Joan Littlewood's initial ideas behind the Fun Palace project (1964), the appropriation of certain aspects of the agitprop political movement allowed the development of an adaptable building. This building was a concept, a place for people to build spaces and produce activity sharing information and knowledge. An appropriation of an idea pushed the creation of a place that could reconfigure in multiple ways allowing the accommodation of several events. As the concept continued to grow, Cedric Price was invited to embark on the appropriated idea and transform it into an architectural project. Through a series of collaborations, the project evolved into a complex ideology, a theoretical masterpiece way ahead of its time (Mathews, 2005). Scaling down the Fun Palace project into

the reconfiguration game, the appropriation of the space is a step that borrows the existing configurations and instructions to further build upon another objective. By understanding the space and the pieces of the game, the player is given the freedom to explore existing conditions and use them to add to the construction of the artifact.

The Reconfiguration Game also explores different experimentation processes during the building stage. The artifact of the game is a representation of an interaction done in a public space. At the starting point of the game, the player chooses to appropriate a spatial configuration that leads to creating a narrative followed by the construction of the artifact. The game naturally implies construction, but as the player is faced with the objects, the initial problems start to reveal the game's intention, to translate through the pieces any condition. In Mitchel Resnick's book Lifelong Kindergarten it is suggested that the process of play starts with the definition of a problem. What to do or what to build is vital to understand what steps are needed to solve this problem. Resnick references this as the process of play by determining different paths of experimentation to attempt and solve the problem (2017). From the perspective of the game, the chosen problem is what leads to the various experimentations. When in public space, the actions of an individual define for a moment that specific space, by using the pieces and experimenting with different fits and forms, the definition of the space follows the action. Through this process of play, one objective leads to multiple interactions in the public space, thus creating the many definitions as outcomes.

By establishing the instructions and what each process represents, it is hoped that the reconfiguration game can involve the player in a configuration while the narrative stimulates the production of an artifact that translates the public space. The first attempt was a trial run to see if all pieces matched and if the game could produce the expected results. The location selected was the Parque São Lourenço in Curitiba, Brazil, a well-known public park by the locals filled with trees and grass areas to sit and relax. This place represents the local culture where people exercise, socialize and breathe a different atmosphere from the busy confusion. After trying to settle away from other groups of people, the game starts with no objective in mind.

The artifact is the experimentation process, and the problems are the thinking process while trying to fit the pieces together. As the game's pieces are layed on the ground, it begins to present itself by showing its modular pieces that fit together to build something that initially is unknown. The final product is open according to the player's imagination. As the pieces start to interlock into each other, the space begins to be defined through the actions made in that space. At the end of the game, the artifact transforms into a device capable of translating these spatial definitions and becomes a symbol of that interaction.

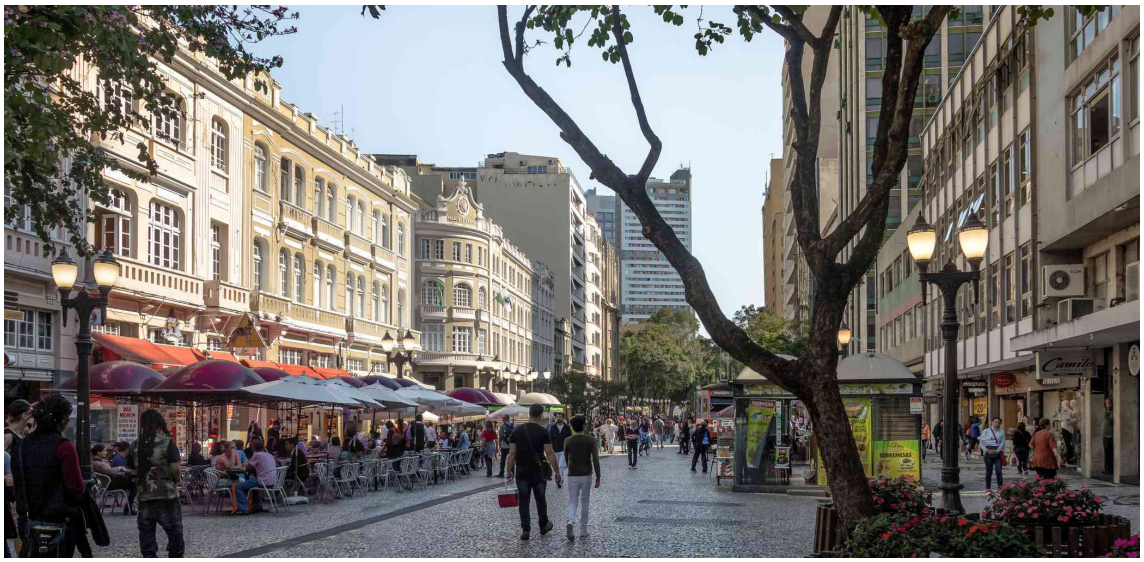


Fig. 54 XV of November Street, known locally as Flower Street, located in the heart of the city of Curitiba.
Source: Diogo Grandi.

The following player observing the process chose the initial problem to create an artifact that should be symmetrical. The player's reality induced his interpretation of the space as something that should follow a strict order, something not seen in the park. The narrative reflected the player's understanding of an ideal world where every piece is correctly aligned accordingly. As the first impressions of the configuration took place, the initial discussion for the game was directed on the potentiality of the game to assume any object desired by the player. Before the game's instructions were given, the player was already fitting the pieces together trying to draw a strategy to build the narrative envisioned. As the pieces fit together, the player never hesitated or asked if the actions were correct. The interactions were automatic as the player

appropriated the space, and the reaction to the game was general excitement. As the player positioned each piece in its place, one piece seemed to fit the artifact. Although the player was visibly frustrated, through creativity and experimentation, a new plan was quickly put into practice. The collection of pieces contains an even number of a specific type of fitting, except for one design which was purposely thought to be an uneven set. This was meant to create unpredictability, offering the player a different condition and see how the piece would be integrated into the artifact. In the real world, this is a temporary condition, an unpredictable event in which people must learn to adapt and not affect the interactions in public space. This creates a confusion with the player as the piece did not seem to fit the narrative. At the beginning of the game, the problem was to create a symmetric artifact. Now, the player couldn't find the correct place to fit the piece. Instead, the player appropriated the game and created a new instruction placing the piece in a way that didn't involve the notch fittings. The piece was part of the artifact but did not follow the original rule. The player adapted the game to its reality, and through the experimentations, the artifact represented the player's interaction that led to a definition.

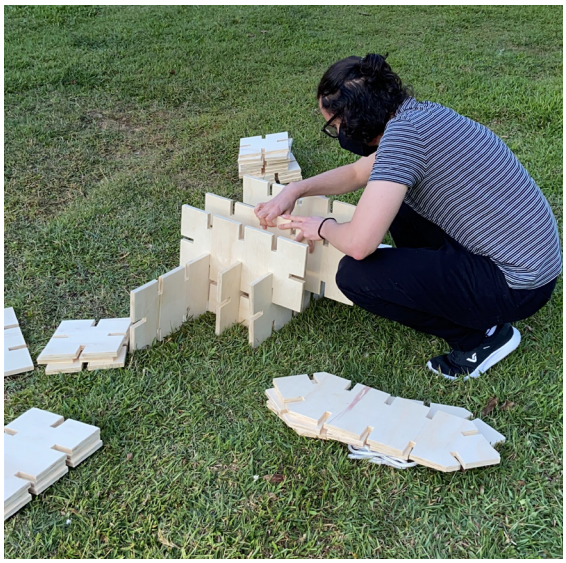


Fig. 55 Building a simetric urban artifact. Source: Author.

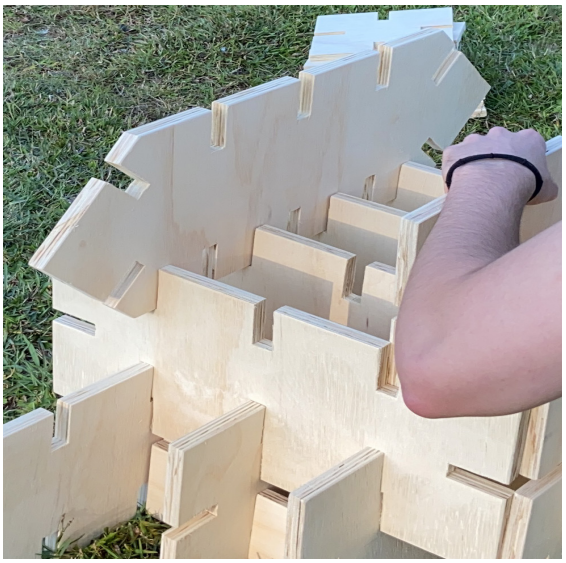


Fig. 56 The adaptation of the rules of the game to fit a piece accordingly to the player's narrative. Source: Author.

The next game was a collaboration between two people in another place selected by the players, in a small square at the civic center. On arrival at the location, it was noticed that people were bringing to the public space folding chairs and tables. The majority of people there would appropriate the space and build their space, thus defining it through the furniture. This first analysis suggested that the game could be the construction of a chair. The problem of not having urban furniture in that public space was what stimulated the action and determined the objective. The pieces laid on the grass slowly started to resemble a chair, and during the last fittings, the seat was built by adapting one of the pieces to be positioned horizontally. The seat happened as the players borrowed the previous game's instructions to fit the current reality, an appropriation of another appropriation. This example is seen in the stacking of the rocks reference, people viewing the artifact try to recreate the same game mimicking the implied rules to build the artifact, explained in René Girard's Mimetic Theory[36]. By doing so, the game is appropriated and changed into something original to the player. The object may have the same aesthetics, but the process is different. In the end, the chair seemed to fulfill the objective, and the game was done. As the pieces were being dismantled, a small side experimentation happened. The idea was to play a short game following the instructions

36 Palaver, Wolfgang. (2013). René Girard's Mimetic Theory. In [Kindle Version]. Retrieved from www.amazon.com.



Fig. 57 Building an ephemeral public chair as a result of a initial survey. Source: Author.



Fig. 58 Chair Design as a group effort. Source: Author.



Fig. 59 Reimagining the Restrictive Drawing as part of Reconfiguration Game. Source: Author.

of the previous Restrictive Drawing game with the wooden pieces of the Reconfiguration Game. This was a crossover of two games created to evidence how different interactions in the same public space generate different definitions.



Fig. 60 Understanding the themes behind the urban artifact. Source: Author.



Fig. 61 Translating the barriers and frontiers of a urban configuration into the game. Source: Author.

The next game was played at the Praça Santos Andrade, close to the city's historical center. Due to the covid-19 pandemic, the once vibrant city square close to the public university became a space filled with the homeless and drug addicts. The high unemployment rate transformed the lives of simple people condemning them to live in a difficult situation. The game somehow got influenced by these events, and the player chose to recreate the situation with fictitious barriers. The problem was to capture how the economic crisis affected the poor and protected the rich. As the player laid the pieces on the ground horizontally, the barriers became more evident. In addition, the game was more than an appropriation of the space, it was a comprehensive interaction that drew the frontiers reconstructed from the events that were evident. The game established a space and divided it according to the narrative, following the emotions captured in that urban configuration. Other elements in the public space were used to emphasize the narrative, a pavement rock positioned in the center of an encircled space representing isolation. The rope used to bind the set together for transportation was

utilized as the encirclement of the rock, and with a black marker, lines were drawn on the pieces giving a continuous feel to the event. The spatial reconfiguration resulted in a definition that divided the space into different parts. The action segregated and led to a deep reflection on how the barriers affect other aspects of social life. As the game concluded, the player wanted to test other locations to try and experiment with other narratives. The following location was at the Oscar Niemeyer Museum[37]. This game was marked by its influence in public space as the interactions caught the attention of two young girls nearby. While getting ready to start the game, the girls ran towards the players and asked if they could join in with the performance. As the pieces were fitted into place, the girls slowly took over and finished the artifact. This collaboration was a reminder of how certain interactions attract people to join in, transforming the spatial reconfiguration into a group effort. As the rules of the games were never mentioned, the girls showed a complete understanding of how the game was supposed to be played, even incorporating different elements found in the environment. The last game played was a combined effort of both girls into building something that represented their reality. As the artifact translated the spatial definition, it was asked for the young girls to sign a piece as evidence of that experience in public space.



Fig. 62 Contributions from two unplanned players. Source: Author.

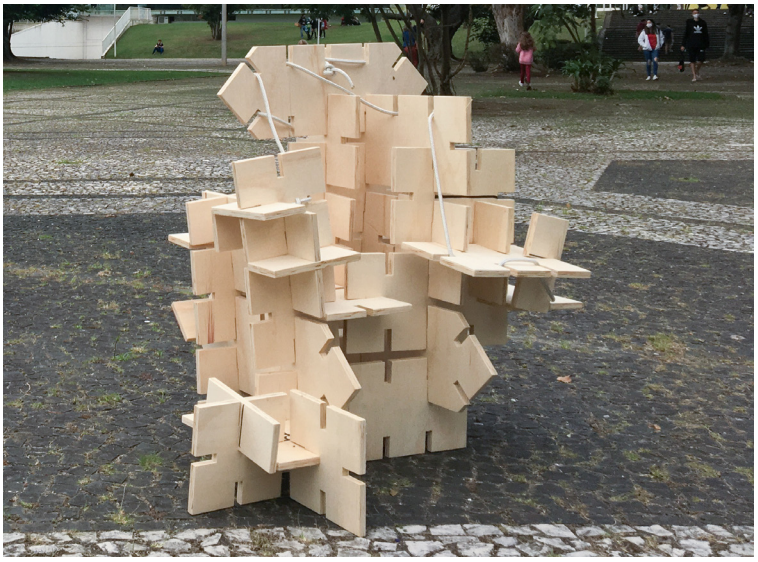


Fig. 63 The urban artifact that was appropriated and build without the explination of the game's rules. Source: Author.

37 Translation from Museu Oscar Niemeyer, MON.

Finally, the last two games were played at the Vila Nova de Gaia Civic Center in Portugal.

During the *Chão em Comum* Ground in Common event at the Civic Center, a temporary structure was built to accommodate many workshops provided by artists and the students at MADEP[38]. This structure made out of pieces of large wood measuring approximately eight by fifteen by two hundred and fifty centimetres was positioned, creating various public space configurations: a stage for performances, seating areas and a table. During the weeks that followed the event, the reconfiguration game was brought to speculate the potential outcomes of playing and interacting with that configuration. As the pieces were put on the floor, a new player asked if she could participate in the construction process. Again only through the implied instructions, the player started to fit the pieces together to build the player's spatial definition. As the discussions started to appear due to the interactions, the game shifted towards the interaction with the wooden structures built for the events. The game was now to try and fit the modular measurements into the uneven surfaces of the wood. As the urban artifact became complete, it was observed that both installations in their proportions had similar objectives, to modify public space and create different definitions. Both interacting with each other was unexpected, which evidences how space is constantly changing through human interactions.

38 Mestrado em Arte e Design para o Espaço Público. Translation: Master of Art and Design for the Public Space.



Fig. 64 The game interacting with another art instalation. Source: Author.



Fig. 65 Endless artifact possibilities. Source: Author.



Fig. 66 Defining public space through reconfiguration. Source: Author.

At the end of the day, one last game was performed. The player tried to build an engine-like artifact trying to fit the pieces symmetrically, resembling the first player. Although the pieces weren't enough to finish the artifact, the player left it the way it was, meaning that the game never needed to have a conclusion to it. His objective was to have fun and experiment with something different. This is what the game intended, to go and explore and play in the public space and discover what types of spatial reconfigurations and definitions can be a result of that playful narrative.

The Reconfiguration Game was developed through trial and error to demonstrate a condition present in the city, multiple spatial definitions through human interactions. The first challenge was to find different instructions that would stimulate action in the public space without its restriction. Unlike the Restrictive Drawing, the rules had to be concealed and implied to the player so that the results wouldn't suffer contamination. The apparent objective was to create an artifact through wooden pieces, but the real intentions behind the game were to find and register different ways of appropriating the space and experiment with its configuration. Another challenge in the development phase was to find ways to inspire people to participate in the game. In few cases, there was hesitance on the game's purpose, leading players not to understand the relevance behind the exercise. A simple instruction like "build an artifact" wasn't enough to motivate someone to play the game or stimulate creativity. The instructions needed to be clear, and the motives needed to be partially explained to not interfere with the potentiality for unique results. Before a game would commence, the best explanation was to choose a place to build something using the pieces to generate a discussion. This led to many conversations about the intentions and pieces of the game and how they could have been different to fit their narrative, not so much on the impacts of spatial reconfiguration. During the discussion, the game author's responsibility was to direct the discussion towards the changes made in public space during the game, trying to associate the results to the chosen actions. Other challenges affected the development of the game, such as the Covid-19 pandemic. During these times of uncertainty, going into the public space and interacting with other people and objects may not be the best idea. With careful planning and well-established

communication with the players, the best locations were chosen to avoid large crowds to play and generate good discussions.

Another fun fact was that the game was contagious to people that observed the performance, often trying to understand what was going on. Different encounters occurred where people stopped their activities to come over and ask the purpose of the game. This is a reminder of how certain interactions in public space may influence others to perform similarly. In a way, fun is naturally contagious, and people respond positively to fun activities, especially children, as seen in one of the games. Furthermore, the game has taught the importance and the inevitability of improvisation, either when creating environments and objects or dealing with different social interactions. It implies that there will always be an agent that executes an action, through mimicry or just following a sequence of objectives. It questions how the reconfiguration of public space through interactions defines a configuration? In addition, it discusses the efficiency of the object being the final objective of the game. Is this game the final object? Can a game not have a final object or, can an object be everlasting? Slowly growing by the addition of pieces that are a contribution from different people? The game's goal is the stimulation of action in public space, it is what it needs to be, a tool designed to create discussion and reflect on the current conditions of public space. As people produce their space unknowingly, the game changes the parameters by introducing playful awareness when interacting with the city. Many times the development process or the execution of the games had to adapt to unpredictable events. Also, understanding that even when given the instructions, the game could lead to different interpretations adding new and exciting content to the discussion. As an architect and someone taught to design spaces, this exercise reflects what type of space is being produced and how these spaces affect human action or how human activities affect these spaces?

All in all, the games had positive reviews from the players, we all had fun experimenting with different configurations while exchanging knowledge.

Participants: Derek Orlandi, Rodrigo Barbosa, Ana Paula Barbosa, Camila Andrade, Beatriz, and Elisa. Ana Willerding, Daniel Sorrentino, and Letícia Poyares.

6. RESULTS

The dissertation started by analyzing the intrinsic relationship between public space and the people that interact with its configuration. By reading the interactions done in public space, the hypothesis of a neutral space became more evident as the space was constantly being activated through different actions.

What gives the public space its definition isn't so much its configuration and its elements, but with the link between the space and human action. After continuing to follow this line of thought, the city starts to resemble a board game where characters access different areas to achieve objectives and gain experience. By associating real-world public space with a fantasy game, the comparisons emerge and the urban configuration now becomes a series of plugs and terminals to be accessed. If the public space is viewed as a game filled with input-output terminals, maybe the best way to analyze different types of outcome definitions is through playing. The action play is free to be anything possible, to enable the interaction to define whatever according to the individual's narrative. Play is a tool to learn about how people appropriate and define public space. Play is the methodology chosen to analyze and discuss the outcomes of each definition. Play is also the action to create a process to research and to experiment with the information gathered. To read the results of using play in the public space, something is needed to drive the player to search for the outcomes that are generated from the games. The dissertation aims on the creation of tools designed to achieve desired information. Not that these tools will be able to analyze every spatial definition, but it is an experimental iteration, an initial attempt to understand what goes on. Therefore, two games were created to be played in public space, both with similar approaches but with different rules, instructions and dynamics.

Both games tried to simulate through different instructions how human actions affect public space definitions. In the first game, Restrictive Drawing, the instructions and the actions are explicitly enunciated, suggesting the outcome intended. The actions that follow produce

subjective data according to the influences suffered by the spatial configuration, events or personalities. Also, drawings on each surface were a reflection of the variety of actions that can occur by stimulating urban performance. The results of the game made it possible to understand how each individual produced their space and what relationship between person and city influenced the outcomes. People use their creativity to find loopholes in the established rules of the public space to exploit these spaces to their benefit. Public space conventions and rules prevent free actions, conforming public behaviour to what is acceptable and dictated through laws. A public sidewalk is meant to allow pedestrians to transit through different urban areas. But when someone places objects to sell on that sidewalk, it creates a different dynamic. The results also show how unpredictable spatial definition is. At the end of the game, the drawings done by the beach were erased by the rising tide, which reflects on how spatial definition is temporary. Public space being a neutral ground enables multiple definitions, creating an intense vibrant life. When a definition is over, another takes place renewing the livelihood of the configuration. Space is constantly being produced and reconfigured, these actions create influences that affect others surrounding the activation of the space. The street merchant that redefined his existence on the sidewalk is now influencing others to join in the reconfiguration or to create an emotional reaction to his behaviour. The influence is like a ripple effect, once public space is disturbed, it contaminates the surroundings and changes the initial conditions of that space.

As these interactions in the public spaces of the city continue to happen, there is empirical evidence that suggests how rules, instructions and different configurations influence body movement. In this dissertation, rules are defined as a list of instructions that when broken there are consequences. Instructions on the other hand suggest a sequential set of actions to be taken, usually with no consequence if the individual deviates from the order. It was observed that human behaviour is influenced and conditioned at all times through these rules and instructions that try to control the public space. Also, the physical elements of the city contribute to behaviour conditioning while interacting with the urban configurations. In the game played at the São Roque Park, the instructions were the main factor for influencing

her body expressions to manifest as a result of the players interpretation of how to perform in public space. A simple list of actions that were subjective to the player transforming the performance unique. In addition, the game played at Vila Nova de Gaia is a reminder that the physical conditions of a configuration further influenced the interactions in public space. The drawings done on the rugged stone pavement conformed the action done so that the lines would be drawn according to the cracks and lines between each stone. As the line disappears, the outcome of the game becomes unique, the configuration influences the action and the result can barely be seen. These are examples of how similar rules and instructions generate different outcomes from unpredictable events, conditions and behaviours.

The second game, The Reconfiguration Game, suggests a similar approach to the first game with the difference of hidden rules and free manipulation of objects that create public space definitions. The game implies certain actions regarding spatial and object reconfiguration but does it in a subtle non-verbal way. It is up to the player to subjectively understand the rules and execute the action. The first game played tried to conform the modular pieces into a symmetric object that reflected the player's personality. As the tacit rules were being bent, it was interesting to observe how people understand, reflect and act upon the rules of the public space and the elements that make a configuration. The deviation of the rules creates different usages of the space, each one to meet a necessity. A sign written "No loitering!" directly implies not to stand around and do nothing, but during a rainstorm, if the place is sheltered people may stand around to protect against getting wet. The interpretation may be based on a technicality and the space is made as a result of its user. The game can also be an invitation to investigate the city, to look for different elements and to highlight or add to an existing configuration. The result of the game initially chose to use the pieces to recreate a chair to sit at a small square. In a real-world situation, it is a common sight for people to appropriate a public space like parks or city squares with folding lounge chairs and tables. The addition of different elements to a configuration is a result of a careful process of investigation. Tactical Urbanism uses this technique to first understand what is the space to be occupied, to then suggest additions that could reconfigure and improve the public space experience. In many cases, the rules can also

be bent as a way to better accommodate the usage of the space. Times Square in New York City is a great example of bending rules to change a mentality from a car driven neighbourhood to a pedestrian-only area. As the city proposed these changes, subtle implementations were done so that the citizens would accept and embrace the new urban configuration. It is all part of the experimentation process, to search and observe for a place to exist while adding according to a necessity and experimenting to see the spatial definition as a result.

The game can also translate into objects current events that affect public space. The results of the game played at the city center in Curitiba were a reflection of the continuing social-economic crisis that got worse as the Covid-19 pandemic was met without precautions. A barrier was the main theme of the artifact built as it represented a behavioural tendency towards the public space. People gathered at the square without homes, food and the correct precautions against the virus in contrast to the middle-upper social class living in their comfortable homes is put as evidence of the government's neglect of its people. The game served as a reminder of how events are constantly changing how people use and view the public space. In this case, the atmosphere of that place, in particular, was eerie causing people to either try and use that public space for an advantage or avoid it completely. On the brighter side, the game deals with other behavioural aspects that happen in public space. The last game played in Curitiba caused a ripple effect where the attention of bystanders were caught and stimulated them to join in the game and help create an artifact. As people start to interact a certain way in public space, there is a possibility that other people might join in. The public space enables this type of interaction, it stimulates action and invites social life. The behaviour seen in this case was of friendly curiosity towards the pieces, two girls without even knowing the rules of the game asked if they could participate. The final outcome was an object was unaffected by previously played experiences, instructions or mimetic behaviour. The artifact presented itself as a unique creation that followed the unspoken rules. As seen in the example of the game Stacking of the Rocks reference, the first artifact built serves as an inspiration to build other artifacts along the coast. It is in the player's interest to create an experimentation process while stacking the rocks in different places. The influence can stimulate action in public space,

even by repeating the instructions the outcomes have a unique perspective. Both research and the games are not meant to be final conclusions of what transpires in public space. Similar to the process of play, this dissertation is all about testing ideas in different ways to see what are the outcomes that change the perception of public space. It is impossible to predict how people will use a particular configuration, but it is fun to speculate how and with what tool the outcome will show the most. It is about the perspective of the player, the essential agent that causes the spatial reconfiguration, redefining it according to the action. The space is changed by the individual, and the individual is changed by the configurations present in public space.

Furthermore, the game is not only the means to understand the definitions of the public space, it is about taking the elements of a configuration and playing with the various object scales. The creation of redimensioned objects that are repositioned in the public space that create unpredictable configurations and narratives. Like the Fun Palace project designed by Littlewood and Price, the game plays with spatial flexibility through its constant reconstruction. By the appropriation of existing places and the experimentation with elements that are available, or items that instantly pop up, the space created enables people to learn, allowing them to understand what is the space being produced. The size of the fabricated pieces are reduced to be able to drift around the different public spaces, employing a similar methodology in each game that produces a unique experience. Although the game's pieces are able to create the desired data, the idea behind the dissertation is to continue to play with the discovered techniques and to continue to create other prototypes in the future that will allow the production of public space definition. The game series will always be open to continue its development, evolving in all aspects in aesthetics and instructions.

The dissertation initiates the discussion of how to break the seriousness of public space products, being open to playful actions that can lead to numerous spatial experimentations. It is an open-ended dissertation, as well as the narrative chosen to play this game called Master of Art and Design for the Public Space.

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