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FORMAMENTIS

FOR A
DIDACTICS OF
ARCHITECTURE

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For a Didactics of Architecture

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The book aims to gather stories of *FormaMentis* that range from theories to methods, from experiences to paradigms. Originating from the international seminar 'FORMAMENTIS. For a didactics of architecture', held at the Politecnico di Milano on 23 March 2023, organized by Emilio Faroldi and Maria Pilar Vettori, the volume aims to offer the scientific community an opportunity for dialogue and reflection on approaches to architectural knowledge. The seminar was attended by some of the most prestigious representatives from the main European architecture schools and culminated with the keynote address by Yvonne Farrell and Shelley McNamara, founder of Grafton Architects. Building on the rich discussions of the seminar, this volume is a revised selection of essays, organized by the editors into three thematic sections: theories and methods; experiences; paradigms. The editors' work ensures that the contributions come together to form a cohesive and engaging exploration of the subject. Without the active engagement of all the authors, this publication would not have been possible.

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THE URBAN EXPERIENCE AT PORTO SCHOOL OF ARCHITECTURE

CONTEMPORARY AND INNOVATIVE EDUCATION PRACTICES

PORTO

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This article describes a specific pedagogical approach to urban project, part of the master's programme in architecture of the Faculty of Architecture of the University of Porto (FAUP). Simultaneously, it is an opportunity to explain the reasons for using the term 'urban project', which, in our view, reveals a much broader scope of complexity, instead of the designation 'urban design', usually considered the standard translation for the English-speaking language of the term *projeto urbano*, in Portuguese; in fact, the use of the concept of urban project works as an attempt to emphasise a design framework that considers both the complexity of the relevant issues that concern the urban scale, as the perspective, and tools that allow the architect to synthesise a reasonable and well-founded transformation. As we explain, this multi-scalar approach relies on a comprehensive method of reading the territory that recognises values and develops solutions in a conceptual space between planning and architecture.

The text considers four parts, the first of which aims to explain the integrated master programme curriculum, while the second the territorial context, both contributing to the materialisation of the teaching context; the third part focuses on the didactic experience of the Urban Project Studio; and, finally, the fourth part – considering an enlargement of scale and complexity – launches a proposal to broaden the debate, given the experience of recent years and the challenges of the present.

The integrated master programme: curriculum and influential teachers

The curriculum of the integrated master's programme in architecture at FAUP comprises five years. The design studios are annual and occur every year from the first to the fifth.

In line with the tradition of beaux-arts, in the studio, hand drawing – and drawing in general – is considered a critical thinking tool to face architectural and urban challenges. Drawing is much emphasised since it is regarded as a fundamental tool for knowledge; it enables synthesis, which is seen as a way of understanding reality.

Although the practical exercises and the architectural proposals developed in these studios always consider the object and its urban setting, the urban territory is treated as a proper theme only in the 5th year of the master's programme.

Simultaneously, the annual subjects of Theory and History of Architecture are present throughout the first four years, while the courses of Urbanism – theory and history – correspond to only four semesters from the third year onwards. This limited time devoted to urban themes contributes to recognising the urban scale experience in the 5th year as new and significantly different from the contents and experiences of the previous years.

In the field of architectural project, the primary references for the methods and tools explored in didactics are the practices of famous school

architects like Alvaro Siza and Eduardo Souto de Moura, who learned from other influential architects who preceded them at school (although not as internationally recognised); instead in Urbanism, urban project and urban design, the names that lead the teaching, experiences and didactics are others.

If one wants to speak about the relevant names to Urbanism, we must mention Nuno Portas. He is an architect widely known in Southern Europe and Latin America, with broad experience in teaching, research and public administration. He was a full professor of FAUP responsible for the theoretical courses of Urbanism. However, two other names also have to be mentioned: Manuel Fernandes de Sá, also an architect, was full professor coordinator of the Urban Design Studio for many years, bearing vast professional experience in plans, urban projects and urban design; Álvaro Domingues, a geographer, younger and still active, who is responsible for introducing a new and relatively complex perspective in contemporary urban issues, which he teaches in the context of a theoretical course on Territory and Urban Forms.

They began to work together in the Eighties. The extensive and diffuse settlement of the Northwest of Portugal has encountered researchers available to deal with its differences, concerning the recognised, consensual and accepted values for what many others consider the 'good urban form.' Many publications resulted from the studies carried out. The research and work produced for several public institutions in different times and circumstances – including those relating to the North and Centre Regional Plans – have contributed to overcoming the blockage associated with the inability of existing models or instruments to meet the challenges of these particular urban contexts whose values are rejected by many scholars. They recognise diversity through the evidence of reality and seek to attain new levels of understanding from their studies. They sought to highlight the need to value heterogeneity, identify and understand its different meanings, as well as the actual characteristics that distinguish each pattern of occupation, its risks, vulnerabilities, and values, and determine the framework to promote specific actions. This approach, which accepts the existence of non-canonical forms of occupation and different scales and seeks to understand the dynamics and the systems that structure them, has established a method of reading from the diversity that is inclusive and without preconceptions.

The territorial context: a particular reality that changes the perspective

The Faculty of Architecture of the University of Porto is in Porto, Portugal's second city, in the Northwest of the country. Portugal has never had strong planning. Portuguese planning only got off the ground with low technical resources at the end of the Thirties, during the period of the dictatorship, through when a law was passed requiring the

creation of beautification plans for towns and cities. Far from the golden age of the Portuguese discoveries, the regime's image and ideals would find form on paper but, in many situations, ended up not being realised in a pretty isolated country with a deficient level of development, which lasted until the early Seventies.

With the arrival of democracy in 1974 and the admission into the European Economic Community in 1986, the state invested mainly in constructing infrastructures and public facilities and promoting missing public services. The emergence of the middle class and the promotion of collective and individual housing was guaranteed by the ease of access to credit and the massive increase in private real estate investment. Without the capacity of the local government to implement the strategies defined in the municipal plans required by European directives, the interventions of an economically empowered private sector led, in the Northwest, to the reinforcement and intensification of a logic of occupation that took place between urban centres, further dispersing buildings and urban uses in the territory and mixing it with agricultural and forestry areas.

The configuration of this territorial reality has moved further and further away from the canonical principles of the traditional city while at the same time distancing it from recognised and accepted urban compositions and ideals. Even when confined by minimum compactness values, the urban occupation of the Northwest of Portugal is dispersed, concentrated, or combined in different ways. It does not derive from a single logic, nor is it homogeneous. Its distribution in the territory is quite different from the one that relates to conventional ideas and representations that focus strictly on the constrained notion of 'city', even though there are specific urban clusters or subsystems.

As such, if, on the one hand, the recognition of the distinctive characteristics of each complex material or fabric allows the decomposition of the territory into identifiable combinations, facilitating its apprehension, on the other hand, the production of meaning that presupposes observation as a starting point, decomposes and recomposes, perceiving the units and elements that constitute them. This effort at simplification must, however, bear in mind the plural and multi-scalar nature of the multiple composite elements that translate contemporary urban reality and must recognise the importance of analysing its various forms, scales and contexts of representation, which, although unequivocally correlated, can be broken down into independent levels from a graphic point of view, to make their apprehension possible. Understanding the territory and apprehending its different dimensions and the diversity of contents that compose it, require different levels of information; it demands simultaneously reading at different scales and considering the various overlapping contents (the wide angle and the zoom). This procedure is the only way to ensure that both the complexity and the varied dynamics operating are legible.

All the knowledge acquired over several studies enabled them to understand this reality's multiple aspects based on the principle that one

should face that the territory has its own identity that cannot be rejected as it corresponds to a materialisation of its society. This conclusion allowed the development of a rigorous, demanding reading method that adapts to any territory without comparative preconceptions.

The Urban Project Studio: a dynamic didactic experience

Projeto 5 – the Urban Project Studio – is a laboratory, a platform prepared for experimenting with the problems associated with the practical or on-land recognition of urban issues and interventions in contemporary urbanisation.

The exercise intends to enable the future architect to interfere in contemporary reality. The challenge is presented in a relevant urban sector with no predefined boundaries or previously identified programme. The students must develop new skills in observation, interpretation and intervention to envision the future of a particular territory. This request represents a considerable difference from their previous academic experiences since, until then, they have been acquainted with a project approach centred on the architectural object and have been practised at implementing a previously defined and spatially confined programmatic order.

In practical terms, groups of three to five students must respond to the four phases of the syllabus: the first phase is the prospective characterisation, which means project (prospective) but also analysis (characterisation); the second phase stands for the definition of a systemic vision and the proposal of an intervention strategy; and in the third and fourth phases each student will individually develop a particular urban area protagonist in the compliance of the overall strategy and integrating key public spaces.

During the conceptual process, it is fundamental to set up areas of reasoning and grounding decisions in order to deal with diverse and sometimes conflicting interests. Knowledge, experience, ethics, ideology, principles, models, values, and even time, among others, are affected by the requirement of proposing an urban strategy grounded on a collective and consensual vision for the city. Ultimately, all the individual developments of each section proposal have to be framed in the scope of the intervention programme that stems from the strategic vision formulated by the group; if corrections arise, they should be negotiated and, if required, lead to adjustments in the overall strategy.

This framework establishes a critical learning space in the architecture curriculum. The permanent debate, promoted in classes and spatialised in the drawings, reflects on the relevant issues of the city and the territory, discusses methods of approach, and considers planning instruments and urban politics. Based on strategic reasoning for intervention, it seeks to bring architecture – through structuring projects – to the field of planning while also recognising multidisciplinary as fundamental to the control

of urban scale. Time is also considered a relevant dimension of the transformation; it must integrate the proposals, and drawings must show different levels of conviction in the distinguishable refinements of form and the diversity of representation.

In recent times, with the perplexity that has arisen from several systemic crises, it is hoped that Projeto 5 will guarantee a pedagogical process that also creates a space for critical reflection on the new and more significant uncertainties affecting the territory and its players, on the multiple scales and behaviours at play and their converging or conflicting values. In many circumstances, this framework imposes a highly selective tactic in the proposed physical transformation by discussing new approaches and tools. Furthermore, the challenges of the 21st century are even more significant. Climate change and the awareness of man's limitations in the face of a planet reacting to the effects of the endeavour to progress constantly, which marked the technological advance of the 20th century and distanced man from nature and other species, demand a new ethic. This ethic must be founded on new values and will be fundamental in redefining the architect's role in his relationship with the world, the urban spaces, and society. Bringing together complementary subjects and increasing awareness of the contribution of disciplines that overlap with the field of architecture, although traditionally apart, the Urban Project Studio makes it possible to grasp the problems and test approaches and solutions that might respond to the challenges of this century.

A challenge for the present: *NEB goes South* as a platform for educating on architecture

Innovative teaching frameworks rely significantly on a permanent concern to align the efforts of students, teachers and researchers with the world's current challenges.

The systemic, inclusive and iterative dimensions that materialise and overlap in the urban territory highlight the pertinence of recognising architecture's capacity to change the paradigm of solutions advocated in the past based on new societal consensus. Architecture must recognise its dynamics and the effects of the actions it promotes. However, at the same time, it must comprehend its potential to contribute to the redefinition of our environments and the reinvention of our cities by assuming its capacity to respond to the present challenges while establishing a new empathy for future spaces. Climate change is on the agenda, but its significance is not merely extreme weather, droughts, torrential rain, cyclones and all the other climatic phenomena and their effects. It means consequences and, above all, social costs. Inequality and non-inclusion are powerful determinants for a demanding future; the underprivileged are invariably left behind and cannot cope with catastrophes and disasters, succumbing most significantly to their outcomes.

We should move towards the 21st century, recognising the paradigm shift

that leads to a new urban condition as New European Bauhaus aims to inspire.

NEB goes South is a pan-European platform created to broaden and enhance international debate, organised by the Faculty of Architecture of the University of Porto, together with the Valencia School of Architecture, the Toulouse School of Architecture, the Department of Architecture of the University of Bologna, the Faculty of Architecture of the University of Zagreb, and the School of Architecture of the National Technical University Athens. The *NEB goes South* joint statement:

New design and innovation can be more easily achieved and adapted to real problems by taking into account regions which share similar climates, ecosystems, cultures, and societal problems. This shift in thinking about climate, resources, and socially inclusive solutions implies responses tailored to each region that must be discussed and built together.

NEB goes South acknowledges this common geographical and cultural legacy.

Considering the critical role of higher education and research institutions, six schools of architecture from six universities in six different countries expect to introduce a step forward by promoting a network that focuses on changing mindsets, widening participation, finding solutions, and disseminating results. Combining the efforts of students, teachers, architects, designers, engineers, geographers, sociologists, and other scientists and artists with the ideas of everybody concerned to create a Southern perspective for New European Bauhaus goals to contribute to a climate-neutral Europe by 2050.

This initiative expanded the number of collaborators at the faculty and widened the number of participants throughout Europe. It went beyond the urban project to include all the relevant dimensions of architecture and all those interested who joined together for co-design events and practical workshops.

NEB goes South was recognised as one of the first three community-driven NEB Labs by the European Commission. As mentioned above about Projeto 5, this initiative emphasises the idea of a laboratory as a collective space for experiments. It relates to the act of experimenting in order to analyse, verify or learn about something. It also indicates the act of putting into practice and, for that reason, trying, proving, testing, advancing knowledge, and going further.

Besides, recognising the ability to relate the academy and the academics to a world that is undoubtedly changing at a breath-taking pace is the main reason it can be asserted that it promotes innovative learning environment.