

Is Theory of Architecture in Need of Expansion? - A Pedagogical Quest

Fonseca, Teresa & Pelayo, Raquel

Introduction

This article addresses pedagogical issues in the field of theory of architecture and its teaching practices. It reflects upon the modalities of ideation and idea representation within a disciplinary field that aims to produce and develop theoretical ideas about an imminently practice based activity such as architectural design. Considering that theory is mainly conducted and produced verbally, the main question we ask is if it's possible to academically implement an epistemological architecture approach less dependent, driven and limited by the linearity of the linguistic discourse, and which advantages can be expected of such a field expansion into an imagistic discursiveness? The importance of this issue stems from the limitations of verbal codification and its internal logic in what concerns dealing with a multisensory phenomena like architecture and also from the internal weaknesses and challenges that theory faces today.

Based on the analysis of a case study developed at Faculty of Architecture of The University of Porto - Portugal, we conclude that the prevalence of linguistic research methodologies that are alien to the architecture field practices are questionable and deserve further and deeper discussion. The argument is that within architectural theoretical research, the imagistic methods and processes that mobilize specific artistic cognitive knowledge, like the projective and synthetic skills are tuned with the architecture design practice at many levels and are increasingly easy to conciliate with the verbal ones due to digital media.

Theôria versus praxis

The knowledge field of architecture is mainly an operational and practice based arena that belongs to the humanities. It shares with the arts field known difficulties when it comes to reflect upon its practice. Vitruvius¹ (born c. 80–70 BC, died after c. 15

¹ Vitruvius, Pollio. (transl. Morris Hicky Morgan), "The Ten Books on Architecture". Courier Dover Publications. ISBN 0-486-20645-9.

BC) is the author of the first known treatise that registers and organizes what then was known about architecture. Ever since, written language has been the technology used to carry out all types of reasoning - abstract or generalizing thinking - commonly referred to as "theory". "Theory" has been opposed to "praxis" since as early as Aristotle's² definitions of those two words. In what concerns architecture - or even the arts in general - the way *praxis* and *theôria* relate to each other has never been stable or devoid of tensions and conflict.

In fact, even the EU and EUA academic fields of architectural theory are divided in two different main visions that are hard to conciliate³. In one hand, theory of architecture is seen as subsidiary of the history of architecture and is produced by non practicing scholars that are art historians or architectural historians. In the other hand, theory of architecture is seen as a by-product of design-oriented courses taught by practicing architects that develop a theoretical stance more informally. The first case seems to be the dominant, aggravating the disjuncture between the practice and the theory of architecture.



Fig. 1 - Data from conducted experiment: Students work at curricular unit Teoria 3 at Architecture School of Porto in Portugal - FAUP.

Another problem affecting architectural theory today - that is not alien to what we have just described - concerns the lack of an internal perspective. Indeed, in the three last decades, the debate - be it phenomenological, postmodern or poststructuralist - has been focused on attacking, or deconstructing, the very idea of theory. To do so, the debate has shifted position from inside to outside the discipline,

² Aristotle. (transl. H. Rackham), XIX, Nicomachean Ethics. Harvard University Press (Loeb Classical Library). ISBN-13: 978-0674990814.

³ Crysler, C., Cairns, S., Heynen, H. Introduction 1 in Crysler, C., Cairns, S., Heynen, H. (eds) "The Sage Handbook of Architectural Theory", Sage, 2012, UK. ISBN: 978-1-4129-4613-1.

focusing on transversal issues around logocentrism, phallogentrism and eurocentrism⁴, in an attempt to rethink the enlightenment legacy in architecture.

This complex picture is also marked by recently spotted signs⁵ of a tendency for a strong diminishing of the circulation of writings coming from actual architects and the increase of authors that are art historians, philosophers and critics.

All these clues lead us to the need of constructing new bridges, not only between theory and practice, but between outside and inside the field of architecture. The question we raise, if it's possible to academically implement an epistemological architecture approach less dependent, driven and limited by the linearity of the linguistic discourse, and which advantages can be expected of such a field expansion in to an imagistic discursiveness, underlies in the heart of the described state of affairs.

Note that this question also derives from the differences between written language and images. The structuralist approach, based in Chomsky linguistics, had the effect of maintaining the status of a supposed superiority of language as the natural form of human thought⁶. More recently, Daniel Everett⁷, amongst other Chomsky detractors, has seriously questioned - based on the Pirahã language structure – Chomsky's theory of the existence of a universal grammar.

Recent media theories, based in Marshall McLuhan seminal work⁸ propose new and more effective frameworks for the phenomena of information codification as mental technology. These theories are supported by cognitive science findings about how human mind operates, that do not exclude higher-order cognitive operations from happening during image processing⁹.

Assumptions steaming from the philosophical principle of continuity, from Leibniz to C. S. Peirce, offer a framing for the elimination of scientific bonds and regionalism, in favor of a holistic understanding of things and the interweaving of sciences, arts and humanities .

4 Crysler, C., Cairns,S., Heynen, H. Introduction 1. In Crysler, C., Cairns,S., Heynen, H. (eds) "The Sage Handbook of Architectural Theory", Sage, 2012, UK. ISBN: 978-1-4129-4613-1.em..

5 Ibidem.

⁶ Chomsky, N. "Aspects of the Theory of Syntax". Cambridge, MA: MIT Press, 1965.

⁷ Everett, Daniel. Cultural Constraints on Grammar and Cognition in Pirahã, In "Current Anthropology", Volume 46, Number 4, August–October 2005, pp. 621-46.

⁸ McLuhan, Marshall. "Os Meios de Comunicação como Extensões do Homem", São Paulo: Cultrix, 1969.

⁹ Pelayo, Raquel e Fonseca, Teresa. O Desenho Como Estratégia Cognitiva: Percepção e Criatividade. In "Drawing in the University Today", ed. Almeida, P., Duarte, M., Barbosa, J., Porto: I2ADS. (ebook)URL: <http://www.i2ads.org/dut2013>. 298-296.

The experimental case-study

Between 2011 and 2013, in order to address this issues, Fonseca conducted a pedagogical experiment in the scope of the curricular unit "Teoria 3" (Theory 3) that addresses specifically public space theory. This class is part of the integrated master degree in architecture at Architecture School of Porto in Portugal (FAUP).

The students were asked to develop experimental research using the instruments and methods familiar to architecture making. The main instrument proposed was the construction of a folding to A4 tridimensional analogical model, in white paper, we called the **pSm** (portable space model). The pSm should represent one city public place freely chosen by a single student, presented and discussed by group of 4. That task had to be complemented by other satellite processes, all to be developed on site, like freehand drawing, taking measurements, mental calculus, photography, digital drawing and graphic design, joining traditional discursive processes like bibliographic research, interviews, and writing.

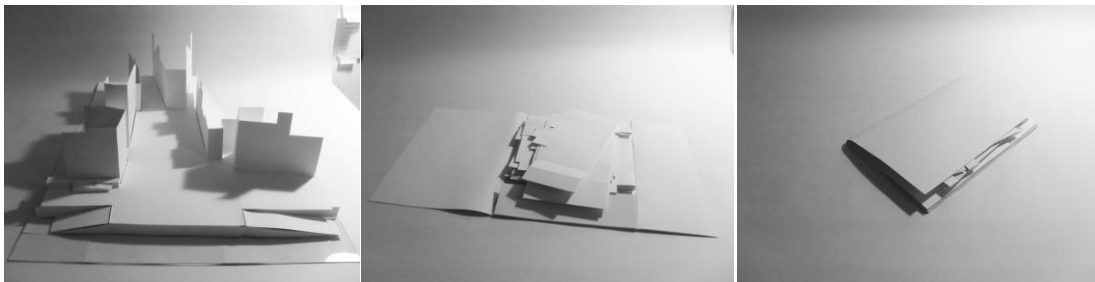


Fig. 2 - Data from conducted experiment: Students work at curricular unit Teoria 3 at Architecture School of Porto in Portugal - FAUP.

To frame the exercise, the students were presented to an implicit understanding of public space as a broad knowledge field of “the body on the move”¹⁰ which implies “practicing” a few of important assumptions rooted in the philosophical *principle of continuity* from Leibniz to *the fold* by Deleuze¹¹, also pursued by C.S. Peirce

¹⁰ Fonseca, Teresa. “O Corpo em Viagem”, AR Cadernos FA/UTL/Arquitectura e Cosmologia n.7 | Julho 2010, 176-179.

¹¹ Deleuze, Gilles. “Francis Bacon – Lógica da Sensação”, Orfeu Negro, 2011, ISBN: 9789898327109

¹² and finally upgraded by Pallasmaa¹³ in what concerns the engagement of the body in the space thinking process, stated as:

- (1) All knowledge comes from direct experience of space (s);
- (2) As interested specialists, we have to enhance the space experiencing as much as possible using instruments that work as catalyzers' of our senses.

As a result, students produced more than 150 works that that were presented in digital support (CD) and evaluated the exercise very positively in terms of what it brought to them in terms of their learning pathway.

The analysis of the results achieved by students/participants of the experiment showed that there are important advantages of such a pedagogical process and that there are also relevant implications to be made in what concerns architectural theory, in terms of its methods and scope.

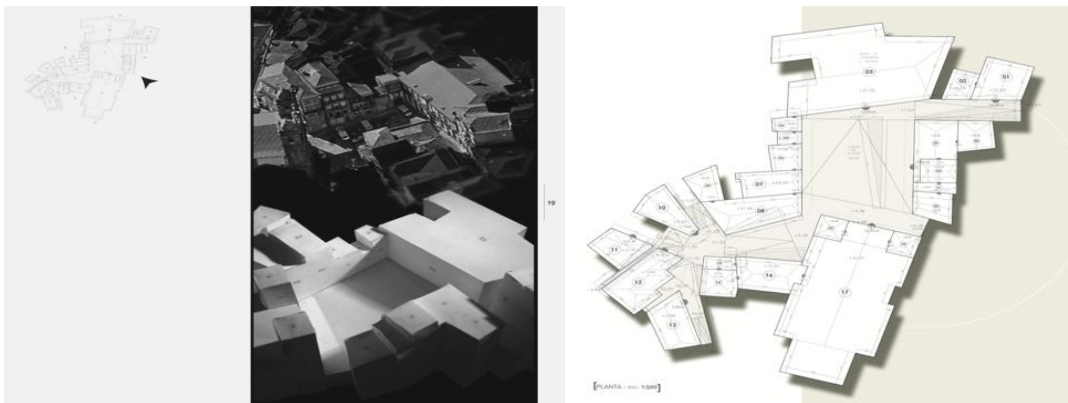


Fig. 3 - Data from conducted experiment: Students work at curricular unit Teoria 3 at Architecture School of Porto in Portugal - FAUP.

The findings pointed to the enhancement of the students ability to deal with space information, as well as the enhancement of the students analytical and synthesizing cognitive processes in a critical and architectonically specific way, that is comprehensive of the issues that can be raised in each case, including forms of residence and forms of collective equipment. In fact, we found that **pSm**, drawings and other representations of the space phenomena done *in situ*, visiting real public spaces

¹² Machuco Rosa, António. "O Conceito de Continuidade em Charles S. Peirce", Fundação Calouste Gulbenkian, Lisboa, 2003.

¹³ Pallasmaa, Juhani. "The Eyes of the Skin. Architecture and the Senses". John Wiley: New York, 2005.

have shown to be powerful alternative tools to question the preconceived knowledge students had of space, a strong critical tool they learned to use, and even a fruitful way to eventually guide future space intervention strategies.

Another outcome is that the experiment has encouraged students to look at second hand literature in an increasingly critical way, which is one of the most important outcomes pedagogically, once students discovered to be able to think for themselves, also when it concerned theoretical abstract paradigms.

Conclusions

We conclude that three-dimensional models and bi-dimensional freehand observational drawings have both shown to be practices that imply an interpretation of space that arises from an inherent confrontation between universal architectonic principles and architectonic circumstantial reasons. The **pSm**, drawings, and other images produced by participants and the final graphic communication design also have shown to be tools able to update the knowledge of the physical organization of public space as a unitary concept of the human institutions form.

We speculate that the reasons for these advantages may arise from the students direct contact with space, as they produce first hand real space representations as systematic survey, avoiding the undesirable trend to place overconfidence on second or third hand knowledge. It seems to us that the exercise has increased the connections between architectural practice and architectural theory, not only by using similar methods, but through creating a need for conceptually constructing a bridge between local, very concrete place, with the the global that necessarily is the conceptual second-hand world of constructed ideas developed by others.

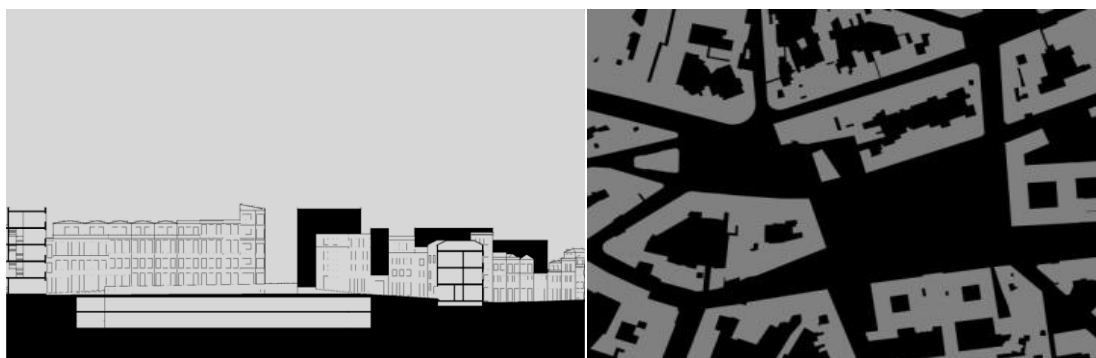


Fig. 4 - Data from conducted experiment: Students work at curricular unit Teoria 3, Architecture School of Porto in Portugal - FAUP.

The added pedagogical value of this approach allows us to question, in the architectural theory field, the prevalence of research methodologies that are alien to this field, and argue that within architectural research, the methods and processes that mobilize specific artistic cognitive knowledge, like the projective and synthetic communicational and visual skills, shouldn't be avoided. By the contrary, it's use should prevail once it ensures the connection to the very architectural phenomena itself, preventing from a liftoff to the abstract world of pure rationalism, favoring a holistic and more comprehensive understanding of the architecture field complexities.

This approach can be helpful as it responds to the various mentioned issues affecting architectural theory today, like the need to build an internal perspective or the need to fill the gap between the practice and the theory of architecture. It also can be a way to counteract the tendency of diminishing the circulation of architect's voices, as well as the questionable status of language superiority in reasoning.