LSRM FINAL ASSIGNMENT

AR3A160 Lecture Series Research Methods (2018/19 Q1)

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THE HISTORY, THE MODEL AND THE INTERACTIONS
A combined approach of three different worlds

I. INTRODUCTION

> "Yes, nothing is transmissible except thought, ennobled by the fruit of labour."[1]

Arguably, those who dedicate themselves to the ancient discipline and practice of architecture would gain an in-depth understanding of the profession and related procedures, largely through architectural pedagogy. This, indeed, poses a vital question regarding the development of an architectural project, and therefore, the methodology to be undertaken. Nevertheless, a general idea is shared, according to which such teaching is a complex and debatable question, full of uncertainties that are paradoxically the best demonstration of its strength and its contemporaneity. Similar to most professions that their value to our societies is of great importance today, architecture also plays a fundamental role in shaping societies in every time and place. This is mainly due to the multifaceted facet of architecture disciplinary tool box and the interrelationship with many branches of human knowledge. This characteristic might be seen from Bruce Archer's intake on the meaning of research for creating manmade artefact, from a designer point of view. As a British mechanical engineer who later became a professor of 'Design Research' at the London Royal College of Art, Archer argues that what the project research aims to achieve is a 'systematic' investigation whose purpose is a form of knowledge that enables the designer for the configuration, composition, structure, purpose, value and meaning of things and systems that would be made by man.[2] This affirmation inspired me a lot, and made me realise once more that the design activity involves intentional processes, from which artefact(s) gains their meaning and formal configuration. The project also involves the way in which a human activity takes place, or more precisely, how a designer's idea and performance influences and shapes his/her work. This characteristic can be seen from the way Herbert Simon approaches the matter of design. In his seminal book, *the sciences of the artificial*, Simon claimed that "the natural sciences deal with how things are, but designing is about how things should be, inventing artefacts to achieve goals."[3]

The field of action of those conducting research in the field of design includes systematic investigation and acquisition of new knowledge in relation to both design as a product (ultimate outcome), and as an act (process). From my personal experience, this process followed from week to week experience, based on a series of lessons and expertise gained in the course of 'Research Methods'. In this process, I was confronted with many new questions, which perhaps I had already in mind but not in an explicit form. More importantly, this process allowed me to rethink the importance of 'analysis' not only for architectural design and decision-making process, but also for perceiving and understanding our living environment. As an Italian who grew up and lived in Milan, I learned, culturally, how to appreciate the exciting built environment as a place that past living has left. Indeed, Italy is known all over the world for its specialised and renowned craft activity that has always been known and envied over time. This way of appreciation, for instance, I learned from how Venetian craftsmen worked on/with glass is sensational, almost as their craft tools is part of their body.

This example exactly described why I have chosen for Interiors, Buildings, Cities as studio as my graduation studio. Indeed, this manual and concrete attitude towards reality, this material and craft approach to the creation of space and artefacts, I think, is one of the biggest legacies I have inherited from the Italian cultural heritage. Precisely for this reason, I think that my thesis project fits into the learning objectives set by the chair of Interiors, Buildings, Cities, where the main approach to architecture is based on 'thinking through making', immediately found an assonance with my way of thinking and method of analysis. The thesis project deals with the theme of the 'intimate city'. The theme states that the city is a place where not only people meet, but also where the private selves are put into contact with one other in

public. Any inquiry into the constitution of the private self, indeed, reveals a construction in which the self finds itself within a set of contexts, effectively creating a subject. The private is, therefore, to a large extent something that is shaped by the 'public'. The Intimate City is, as Georges Perec put it, a place that men would have an inner life and a sense of being in the home where the space offers both interior and interior subjectivity, and is visible to public, simultaneously.[4] Accordingly, the intimate city might be seen as a miniature city, or as a city within a city, as Aldo van Eyck termed it.[5] The Intimate City is experienced in a bodily way, and understood as an experience that takes place through one's own movement between facades and the figures of thresholds such as windows, door steps, porch, courtyards, loggias, and foyers.

II. RESEARCH-METHODOLOGICAL DISCUSSION

> "New perspectives and methods appear all the time, but then they disappear just as quickly, often without analysing the previous methods or evaluating their value."[6]

From my personal experience, there are three pedagogical methods that contributed to shaping my research approach during my university career. The first one is a careful study of the history of architectural projects and sites through the lens of typology. Second, investigating the everyday reality of urban life and architectural space through study models (physical hand models) providing a purely concrete and material approach to my understanding of space and architecture. Finally, a methodology that I found extremely useful for developing an architectural project is observing, documenting, and mapping the everyday life of people, and how they use the space, as well as move and interact within a set of spatial entities. The latter method resonates, for instance, with Renzo Piano's approach for the design of an urban space such as a square. He claimed that "when you design a square in a city, you do not have to design it too precisely, because the square is an empty space and it is these empty spaces that are filled with the unexpected, with surprises, in the reality of life, the ephemeral and with moments of relationships."[7]

Arguably, learning from history and in particular the history of architecture and urbanism might be seen as a basis or starting point for a design process. While learning from history caters for a deeper understanding of the notion of type and typology, as Aldo Rossi would put it,[8] it also enables students of architecture as well as architects to analyse the development of different types of urban forms and structures, and how these forms evolve through time and deviate from one another and their historical roots. Nowadays, for instance, within the city structure, architects face with spaces that cannot be qualified along the classical divide in urban theory as completely private or public. However, these spaces play a vital role in shaping our collective and public life. Typological studies, therefore, became a crucial tool to understand this shift of paradigms in architectural thinking, a shift that focuses on the initiation, conception, development and maintenance of the architecture of city. Furthermore, in my opinion, the simple recognition of the value of history as a necessary support to design process poses a series of questions about the relationship, to be established, between the two moments of 'making history' and 'designing'. The architectural legacy of the past has been used over time as a basis for design, in multiple ways: 1) alternatively as a reservoir of selected and decontextualised forms and models; 2) in search of the 'glories' of a past to be recovered; or of an unidentifiable 'spirit of tradition' forcing its reading to search for the so-called national architectural 'styles'; 3) presuming collective identities, activating collective memories, artificially delineated by drastic selection operations of the elements and values to be considered; 4) as operational criticism; or 5) as a civil commitment. The last two models of reading the history of architecture are, for instance, a main source of inspiration for Bruno Zevi and Leonardo Benevolo, who largely built up their architectural vision based on these models.[9]

Aside from history, employing hand model can be seen as a strong tool and instrument to analyse the spatial characteristics of an architectural design, a method that concerns with the study of architectural elements and with spatial/material experimentation. During the process of decision making, architects use

various tools to implement their ideas in the project. When I use the word 'instrument', I do not necessarily refer to the ruler and pencil stereotypes. In this case, the instrument is used as a metaphor, and the range of design tools is in fact much wider and more diversified. This metaphor is further explained in the book '*Tools for ideas.* In this book, Christian Gänshirt, an architect and researcher, described attributes, gesture, and the language of the primary design tools including sketch, drawing, model, perspective, photography, film, video, calculation, computer, software and simulation.[10] As Gänshirt insightfully observed, physical design tools are to communicate architect's ideas, rules and concepts. Without design tools, the architect's vision cannot be transmitted. In this view, various design tools can be used simultaneously, back and forth or one after the other. All the instruments have different possibilities, but they also have their limits, so architects must know the strengths and weaknesses of each instrument, to make the best use of them. The potential of the physical model as an element of representation of one's own ideas, as Patrick Healy argued, is, in my opinion, an extremely useful, appropriate, and complete tool.[11] What I find extremely useful in the design process is the possibility of working with the model, avoiding perfectionism that advocates one's imagination. In the same way, as Richard Sennett described, in the use of the model one might "understand the importance of the draft, i.e. the lack of a complete knowledge of the details of a work at the moment in which it embarks". Sennett further argued that physical model assigns a positive value to the contingency and limit in favour of the personal considerations of the problems detected in situ as an opportunity that avoids perfectionism and understands when it is time to stop.[12]

III. RESEARCH-METHODOLOGICAL REFLECTION

"It is more through our works that we spread ideas rather than through ourselves"[13]

From my experience, I believe that History can become an active knowledge for the design of architectural projects. I think this can happen particularly when one knows how to turn the history to the knowledge of the processes of transformation, to the understanding of the problems and specific values of architecture and its development over time, setting itself as a premise of contemporary 'doing', in a 'continuity' -not of absolute meaning- of history itself. The study of the type is connected in this sense, as a form of bridge between past, present and future. The typological question inevitably arises whenever we face an architectural problem. Giulio Carlo Argan, politician, lecturer and art critic of the mid-20th century, affirms that the type is the result of a process of critical interpretation that tends to highlight the common and recurring elements found in different works that tend to reduce the multiplicity of formal solutions to a common morphological scheme. Another approach to the matter of type and history is provided by Saverio Muratori. For Muratori, in fact, the type exists only in the mind of the architect. It is a mental project developed collectively through concrete life experiences.[14] Despite this opposition, it is impossible to neglect Aldo Rossi's intake on the notion of type and history. In his seminal book, '*Architecture of the city*', Rossi affirms that the values inherent in an architectural type are eternal, deduced from history only through a process of interpretation that goes beyond the manifestations visible of this; so, the types are formed based on the needs and aspirations of beauty.[15] In this view, I would argue that the type is a core of ideal and transcendent guiding principles. There cannot be a univocal interpretation of the concept of type as typology has no autonomous scientific validity. Accordingly, the type is an instrumental discipline, moment of a wider process of conception or historical-critical interpretation. The concept of mute type changes the idea of architecture that characterises a definite historical period.

Arguably, history helps us to understand how the evolution of a fundamental tool for architects as the model has evolved. The use of representing a building in the form of a smaller plastic copy was widespread in the past, when the technique of graphic representations was less advanced and the execution of a model constituted the best means to understand the work. Mirabile examples of such models dated back to the late Middle Ages and later to the Renaissance, where architects associated the practice with the discourse. Precisely this relationship between the idea and its immediate realisation in a model represents a moment of

prefiguration of a futuristic reality. Through the tactile sensation, the designers physically appropriate the site, by internalising it. This can be seen in the works of Tadao Ando who uses the term Shintai (body) to express the inseparable union of body and spirit, highlighting his formation marked by a profound relationship with nature and the profession. In the same way, Jean Prouvè, French architect and designer, was innovative in his ability to test the intuitive potential of his students at the Ecole des Arts et Mètiers, presenting problems to be solved by direct manipulation of the hands, considered as important as the work of the mind. Frank Gehry also follows an architectural design method and process where hand models constitute the first act of design. A model is made as if it were a sculpture. The edges of this first model are touched by an optical pen becoming the vectors of a reticular system, incipit of a series of models. Another ground-breaking use of model for design can be traced in the Sidney Opera House. For the roof coverage and the design of ceiling, Jørn Utzon proposed a solution in which the surfaces of all the shells were extracted from the same sphere. A wooden cap cut into wedges was made. The voids derived from the extraction of the shells suggest the realisation technique. Once again, it was a physical model that enabled the architect to tackle the complexity of design and innovation.

All these examples, indeed, aim to explain how the model represents a vehicle with which the designer communicates his ideas. In other words, it is the physical model that embeds all architect's ideals/ideas and summarises his/her research process. The choice of the type of model that one wants to achieve is in relation to what one wants to communicate; therefore, it is up to the designer to prioritise. The choice of material is determined by considerations of an expressive order; if placed two materials, one with a rough finish and the other with a smooth finish. The final goal of the model, however, is not to represent the miniature reality, which would distract designers' view in the analysis of spatial and volumetric characteristics. On contrary, the intension is to imagine and understand how in the space, mostly in those empty spaces defined by four cardboard walls, people can move or relate to one another. In this view, it is no wonder to think what the role of architecture might be in creating spaces for involving imagination, and stimulating socio-spatial relationships. This way of looking at the role architects can perform in creating spaces reminds me the metaphor that Ivan Illich describes in the periodical CoEvolution Quarterly. Illich argues that "an oak tree might be in the commons. Its shade, in summer, is reserved for shepherd and his flock; its acorns are reserved for the pigs of the neighbouring peasants; its dry branches serves as fuel for the windows of the village; it could be the place for the village assembly."[16] Indeed, while this could be seen as a romantic metaphor, it indicates how a single resource (oak) has a role in multiple ways and has different meanings for different groups in a village. If we draw a parallel between this metaphor and architecture, one might ask how architecture can play different roles in and for the city.

IV. POSITIONING

> "Teaching architectural design means teaching a defined system with which to face and solve problems; I admit that there may be different systems, and that it may be useful to compare and debate them, but I am convinced that the only chance to get out of the situation in which we find ourselves is to offer everyone a design system."[17]

Rossi deeply believes in the 'scientific value' of the architectural discipline and in the transmissibility of a system of universal rules understood as fundamental principles. In an equally relevant way, he chooses to talk about design and not composition because he prefers the concreteness of this term, referring to it as all of the architect's creative activity. Rossi describes architectural discipline as a block comprising architecture, urban planning and furniture, and consequently stands against the widespread positions that in those years fought in favour of the division between these areas, which he considers the 'constituent elements' architecture.[18] Without any intentions to put or imitate Rossi's statements on the same level as my methodological approach, I believe that the elements that constitute my analytical approach are also part of a wider system. In fact, through these elements, I try to cover the most concrete aspect - as can be that of

furniture - and defined by a plastic study through the development of models. In addition, through the use of type as a way of understanding the history of architecture, it is possible for me to explore the urban field, in order to have complete and complete control of the project. To be sure, the combination of the three proposed approaches - the history, the model and the interactions - in my opinion allow me to analyse a wide spectrum of everyday reality. In addition, this analysis approach enabled me to easily navigate through different design stages and scales.

Already since last year when I started the MSc2 in Interiors Buildings Cities, my methodological approach to the design of architectural projects repeatedly reminds me the phrase of Leon Battista Alberti, who claimed that "the city is like a great house, and the house in its turn is a small city".[19] Indeed, this not only became not only a source of inspiration for me, but also made me think a lot about the direction of my design methodology. More importantly, I found that the approach of Aldo Rossi, that of Leon Battista Alberti, and that of Interiors Buildings Cities has a mutual root and foundation. Starting from the general - the city, the urban scale - they go to the particular - the house, the room, the human scale - and vice versa. Therefore, my method of analysis tries in to a large extent and similar way to emulate this approach.

V. Endnotes

[1] Le Corbusier, *Mise au point*, (Paris: Éditions Forces vives, 1966).

[2] Archer, L. B., *A View of the Nature of Design Research,* (Guildford, UK: Westbury House, in R.Jacques and J.Powell (ed.) Design,Science,Method, 1981)

[3] Herbert Simon, *The sciences of the artificial*, (Cambridge Mass: The Mit Press, 1969).

[4] Perec, Georges. 1974. *Species of Spaces and Other Places*. (London: Trans. John Sturrock. Penguin, 1997.)

[5] Laleh Bakhtiar, ed. Towards a Quality of Life: The Role of Industrialization in the Architecture and Urban Planning of Developing Countries - Report of the Proceedings of the Second International Congress of Architects, Persepolis, Iran, 1974 (Tehran: Hamdani Foundation, 1976).

[6] Tom Avermaete, *Lectures Series of Architectural Design*, (Delft: 2017).

[7] Renzo Piano, *Dialogue on the cities: an interview between Fulvio Irace and Renzo Piano, in "Le Città Visibili"*, (Milan: TriennaleElecta, 2007).

[8] Aldo Rossi, *L'architettura della città,* (Milan: Brossura, 2011).

[9] Alessandra Muntoni, *Lineamenti di storia dell'architettura contemporanea,* (Milan: Laterza, 2001).

[10] Christian Gänshirt, *Tools for ideas,* (Basel: Birkhäuser, 2007).

[11] Patrick Healy, *The Model and its Architecture,* (Rotterdam: 010 Publisher, 2008)

[12] Richard Sennett, *L'uomo artigiano,* (Milan: Feltrinelli, 2009).

[13] Franco Albini, *Estrapolato dal dibattito durante l'MSA - Movimento di Studi per l'Architettura - estate 1959.*

[14] Marco Biraghi, *Storia dell'architettura contemporanea,* (Milan: Einaudi, 2008).

[15] Aldo Rossi, *L'architettura della città,* (Milan: Brossura, 2011).

[16] Ivan Illich, *Silence is a Commons,* (article for the periodical CoEvolution Quarterly, winter 1983).

[17] Aldo Rossi, *La formazione del nuovo architetto,* (Milan: article for the magazine 'The Architect', 1966).

[18] Aldo Rossi, *L'architettura della città,* (Milan: Brossura, 2011).

[19] Fumagalli Cecilia, *The travels of a merchant throughout the Islamic World, A History of Architecture and Trade*. (Routledge, 2018)