The Reflection of Phenomenological Theory in the Application of Mapping Method in Architecture Designing Process

Talking about the relevance of research-methodological awareness in relation to design practice, at first glance, in our design practice, it seems difficult to define exactly the impact of research methodology awareness, since research should be throughout the whole practicing process, at least for me, and in general, research-methodological awareness should be essence of the rational generation logic of the design process. However, when we choose research methods during the design process, in many cases it is result-oriented. For example, when it is necessary to summarize the spatial characteristics of different functional spaces in the process of design advancement, we usually choose to perform typology analysis on the selected cases to summarize the relationship between spatial morphology and function; when we need to sort out the impact of the context on the building during a particular research process, we may apply to the case study method, as "an empirical inquiry that investigates a setting phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident."[1] revised by Linda Groat, from the definition of case study provided by Robert Yin. For myself, research is usually generated in the process of practice. Based on the needs of design advancement, we focus on the specific steps that need to be taken to complete the design work rather than the methodology supported behind it.

However, after starting Master of Science study program, as a graduating student, we are requested to position our own approaches within and to architectural knowledge systems. In Jorge Mejia's lecture "Methods of architectural exploration, evaluation, and discovery", the cognative practice about the notion "M Sc" truly clarified my understanding of the current state of learning. As Stanford Anderson said: "I claim that the architect's problem is not how to found his knowledge positively but how to make his knowledge grow." My understand to this words, under the background of the study program I am in, in that the main concern for design may not be how to find a way to solve a new problem, but to think about the method itself. In the process of thinking about the method itself, what we are clearing is the individual position. This is the most obvious change of my consciousness in the Lecture series of research method class. My graduation studio is Transitional territories, a interdisciplinary studio which is focusing on the question of urbanisation as the outcome of ever-changing interrelations between socio-ecological systems, and aiming to research new forms of living and architecture that are informed by these interrelations, exploring the notions of connectivity, synchronicity, sensitivity, risk, and emergence as instances of urbanisation. At the core is the idea of the agency of design in disclosing new spatial relations, narratives and values through time. At the beginning, we did not have a specific architecture site or program requirement for design, even a topic. we start from mapping analysis of the whole North sea, including seven countries around it. At the beginning, it seemed that the role of cartographic drawings in architecture are somehow more appropriate for urban planning or, at least,for the positioning of the architectural project within an urban or territorial setting. As an architecture student, I never tried to start my analysis from such a macroscopical scale, what is more, for me, this mapping analysis start from no position, which force me to grab fascinations from a wide range of knowledge field. What is more, although mapping can, in principle at least, address and incorporate all relevant aspects of architecture (e.g. place, time, space, form, event, program, signs,tectonics, materiality, etcetera) into its construct, without a clear understanding of the generation logic and usage of mapping, it is not sufficient to achieve contemporary study request only applying a result-oriented design research method In the stage of graduation project. As a result, for my own design project, I must clarify the meaning of mapping, the writing of this brief essay is exactly a learning process about mapping for me.

Mapping in architecture field has emerged during the transition from Modernism to Postmodernism[2]. In

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[1] Linda Groat, David Wang, *Architectural research methods–Second Edition* (United States of America: Wiley publishes,2013), p418

[2] Proefschrift, *PLACE-TIME DISCONTINUITIES: MAPPING IN ARCHITECTURAL,* Technische Universiteit Delft, 2015.

earlier Modernist practices in architecture, maps were used mostly as graphic visualizations of information and data[3] and then were more appropriate for the emerging discipline of planning. And the increased architectural attention in mapping should be historically located in the early to late 1950s[4]. Since then, the attention in the use and importance of mapping in architectural discourse has increased significantly, and, especially during the last three decades, mapping has become a broadly accepted tool employed in a wide variety of architectural research and spatial analysis practices. This extensive interest in mapping only increased during the second half of the 1970s as a result of the discursive obsession with the emerging complexities of the contemporary urban and metropolitan spatial conditions. On the other hand, mapping has been employed in architectural design projects on a few occasions and in rather specific ways, and especially from the late 1970s to early 1980s onwards, during the period of 'paper architecture' and Deconstruction[5], the influential and appreciated aspect of the more general act of drawing has become increasingly important.

As an enormously appreciated activity that has been given attention in recent times, mapping has been acclaimed when applied in spatial analysis. But what is the role of this method in architectural production and how will it shape my project seems to be another story. Although there have been attempts to develop mapping as the starting point, or even conceptual basis, for architectural construct, these attempts have, in most cases, dealt with mapping as a formalizing tool to generate architectural almost exclusively. Most of the literature regarding mapping actually is the discuss of the role only in spatial analysis. During these decades, built environments had been diagnosed with an increased level of complexity, fragmentation and multiplicity and architectural discourse has had considerable difficulties in coming to terms with this complexity and the consequential emergence of urban fields, intensities and forces that organize, control and order architectural works. Mapping, as a method with high potential to be able to cover the information from all other categories of architectural drawings, will play a important role in spatial producing activities in the future. Therefore, this essay intended to discuss the use of maps and mapping within the strict boundaries of architectural production and works. Mapping, in this context, will be discussed not as an alternative to spatial analyses, but as a deliberate attempt to relate processes of spatial analysis to the formulation (or formation) of architectural work.

As for shape of the project, in other words, the formulation (or formation) of architectural work, the generation of building space often cannot be separated from the direct perceptions of space for architects and users. The Mapping method is a relatively scientific analysis process, Maurice Merleau-Ponty said: "What I know, as well as what I got to know from science, are understood by myself according to my views and experiences of the world, If there is no experience, then scientific symbols have no meaning. The whole scientific world is formed on the subjective world. If we want to think strictly about science itself and accurately evaluate the concept and the meaning of science, then we should first arouse this perceptual experience of the world, and science is the Indirect expression of this experience."[6] In my opinion, although mapping cannot be regarded as a representation of a complete objectiveness when used as a site environment analysis, it is a relatively scientific method of analysis. However, this scientific analysis is for architects to read the material before design, but not as a product or a direct tool for design. When we regard it as the design tool, it's discontinuous appears. Therefore, in the process of space design, mapping as a design method needs to be related to the direct sense of human beings. In other words, it is the advantage of mapping, when being used as a drawing technique, the diversity of information that can be carried, the method tend to form a complete result when cooperate with other research. It is why mapping can express informations more than only scientific aspects content, as David Harvey said, 'Maps are simultaneous devices for survey, measure, exploration and navigation, yet they are also rhetorical images. Maps are, indeed, never neutral or value-free or ever completely scientific.'[7] Critically speaking, actually due to the carrying feature of mapping, many other research methods are updated to some extends when it is used in cooperation with mapping analysis method. For example the phenomemology, which are working as the essential combination when we are trying to fill the gap between the design process and traditional mapping analysis as a site

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[3] Example: Ludwig Hilberseimer, *The New City; Principles of Planning,* Chicago: Paul Theobald, 1944.

[4] Joseph Rykwert, *The First Moderns:The Architects of the Eighteenth Century*, Cambridge: The MIT Press, 1980.

[5] Andreas Papadakis, Catherine Cooke and Andrew Benjamin (eds.), *Deconstruction;Omnibus Volume*, London: Academy Editions, 1989.

[6] Maurice Merieau-Ponty, *The Primacy of Perception*, ed. By James M. Edie. (Evanston: 2 Northwest University Press, 1964, p12

[7] J. B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, The Johns Hopkins University Press, 2001.

analysis in practice. It is why I think Mapping has unlimited potential as a design tool in the process of building design, since it has the capacity to integrate other drawing types and cooperate with other diagrams harmoniously and efficiently. However, this potential is not only required of explication and clarification, but also theorization. Therefore, when considering the role of mapping in Architecture formaton, in stead of only Spatial analysis, how the scientific mapping analysis method express human's feeling experience of the specific place representationally, will play an essential role in "architecture formation by mapping".

With the publication of *The Image of the City* in 1960, Kevin Lynch intended to make a set of planning tools for urban design available to a larger public of scholars, academics, practitioners and even non-professionals. In his book, Lynch explained How to build a person's personal urban experience by navigating over time in the city, then spatially organized in one's mind. These information collection about the urban navigation experience were further formalized as a "mental map," studying these mental maps enabled Lynch to distinguish the basic principles of urban spatial experience. In *The Image of the City*, Lynch came up with five spatial elements: 'paths', 'edges', 'districts', 'nodes' and 'landmarks', which formed 'simply the raw material of the environmental image at the city scale.' [8]Lynch insistence on the importance of analyzing mental maps with the specific purpose of understanding the individual's experience of the city has since had some considerable foll*owing and this field of expertise has, in the meantime, become more generally known as 'cognitive mapping'.* The visible relationship of these elements constitutes the "environmental image." A good environmental image can give humans an important sense of emotional security. Identity means being a friend with a specific environment. The object of identification is the real environmental elements and characteristics. The collective city image and collective mental map discussed by Lynch are related with Husserl's phenomenological concept: "inter-subjectivity" [9] , the concept of "inter-subjectivity" brings the discussion of architectural consciousness out of the solipsism and personal consciousness, and bring it into the public and collective urban architectural awareness areas. Husserl's concern is that although the experience of various objects is different, how can they be displayed to different people in the same way? In other words, how to construct a universal view that encompasses the subjective field of view of the individual. When we consider that mapping can be a design approach, the establishment of this universal view will be a feature of the innter-subjectivity that the architect realizes when building a new poetic image.

As a result, being an architect, when constructing a design image in our mind, which is depend on our own experience, We should pay attention to the characteristics of the concept of "inter-subjectivity" that it is structured to establish a universal view of communication with other individuals, which will be the essence of decrease the discontinuous between physical analyse through mapping and the building of the designing communication according to building of the "universal view". On the other hand, when the mapping are utilized as the designing tool, as a specific form of analytical knowledge that can be activated directly towards architectural work, mapping should thus be considered as the pre-text for architectural work itself, not only a existing context analysis, but a formattion of a "universal view", through which, the mapping will be a subjective way of perceiving place, at the same time, in mapping, the designer's intention for the design product in constructing process will gradually become clear in the analysis. Through the phenomenological generative mechanism of the mapping, which can be worked as generator of a conceptual idea, mapping are able to develop its potential, as what I have said at beginning, map activation in relation to architectural production will be able to present the developing process comletely, without any discontinuities.

When relating it with the mapping analysis I am doing in the transitional territories studio, I realized that mapping is not the collection of the data, objective information, according to our main direction, the maps appeared should be the analysis result of the scenarios you doped out, it can be a trend expression, the maps with time dimension. In order to develop the designing process, by doing the map, we are requested to express the scenario, like the "universal view", which is created by collecting and digest the information from the spatial analysis mapping. In conclusion, the mapping method used as a designing tool are not what we thought as a spatial analysis, in order to work as the design toll in stead of only finished as a formalized "pretext", it should contains multi-layer expression, which are able to be finished as a strategy to form the project, and the other methods, like the phenomenology research methods, mapping will work as a "analysis container", and the phenomenology research method will be used in one analysis for one aspect.

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[8] Kevin Lynch, *The Image of the City*, Cambridge, MIT Press, 1990, p43,

[9] Husse*rl, translated by Lian*gkang Ni and Tingguo Zhang, *Phenomenology of the living world,* Shanghai Translation Publishing House, 2016