Reflecting on Public Realm Through an Urban Ecological Perspective

AR3A160 LSRM FINAL ASSIGNMENT
Self-Assessment on Research Methods

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Declaration
* Part of this research is conducted in pair with Hsuan-ya Kao (student no.4736656), under the course structure of Msc3 Methods and Analysis Studio 'Positions in Practice'. I declare that the Position Paper here submitted is individual and original except for source material explicitly acknowledged and referenced.

I. INTRODUCTION

The process of architecture, from research to realization, embodies a heuristic journey where we learnt from knowledge that have been contributed by successive researchers from multiple disciplines. The knowledge that an architectural project embodies, however, is often misunderstood as the mere value of physical forms. This results in superficial reference of architectural precedents involved in many researches. The lesson that enables us to learn more than the architectonics, and empowers us to construct our own epistemology, is embedded early in the research process that leads to the delivered design. The decisions made by a researcher when he structures his methodology, is already positioning himself in a wide spectrum of architectural studies. Such methodological awareness thus serves as a critical apparatus that would anchor our research in the incremental system of architectural knowledge[1], rather than a vacuum[2].

This criticalness of methodological choices has prompted me to reflect on the interrelation between my stance and methodology adopted in my graduation thesis. Throughout the lecture series, I learnt by dissecting how researchers have structured their research process based on not only their questions, but also from what perspective they are answering those questions. The problem of neutrality of an observer presented in the talk about praxeology has especially struck me, as I am also researching on the interrelations between spatial and social practices. Therefore, my research methodology is structured with extra attention paid to the qualitative influence and subjectivity exerted by the inclusion of socio-cultural layer alongside a spatial investigation.

The investigation of the Methods and Analysis graduation studio-'Positions in Practice' focuses on built environment as a common pool resources of knowledge, and architecture as a layered process that depends on various agencies rather than a solo work by the architect[3]. Under this thematic framework, my research question aims to find out how architecture could communicate openness in interpretation of the public realm where people could project meaning onto; furthermore, how architecture could integrate these different interpretations to facilitate an interactive community. In Teusaquillo, a residential district of Bogota, the streets have displayed a wide variety of interactions between people and physical setting. These interactions have accumulated to form a specific streetscape. Many of these interactions, although do not conform with the planned use of the street, contribute to a common construct of knowledge about local ways to inhabit the street. To study how the streets have communicated such open capacity to people for these multiple uses, a methodology based on urban ecology will be adopted. Characterized by the experimental attitude of the chair, the selected methodology based on urban ecology will guide on-going experiments in analysis and also position oneself in the later architectural intervention.

II. RESEARCH-METHODOLOGICAL DISCUSSION

To dissect the composition of an open-ended public realm that embraces multiple uses, the research is approached through the methodological framework of urban ecology, which refers to a study of interrelations among organisms, between organisms and their surrounding habitat in an urban context.[4] Under this greater framework, mixed methods will be employed in this study. The streets are firstly approached through an ecological concept of "affordance". The term "affordance" was firstly coined by James J. Gibson in 1979 (American Psychologist, 1904-1979), which refers to the opportunities for action that an environment offers to an animal, no matter good or bad.[5] This theoretical framework allows this research to approach human perception of the physical environment through ecological perspective. The case studies therefore start with examining the physical characteristics that afford interactions by cutting sections (horizontal and vertical) at dimensions relative to specific actions (fig.1). The tool of sectional drawing is therefore extended from denoting spatial configuration, to revealing a larger capacity for actions in the streets of Teusaquillo. For example, the short garden wall was originally built to defend its garden. Yet, its wide and flat surface at the knee-level affords sitting and placement of food stock by street vendors.

These empirical studies reveal this greater capacity of the wall to interact with other people, leading to the next step of analyzing how do these different interactions coexist in an urban ecosystem. These multiple spatial qualities are then synthesized as a multi-perspective drawing to read a symbiotic relationship[6] between different uses on the same street (fig.2). The implications of these local ecological relationships, are processed by relating the empirical observations to the socio-cultural context. This also involves historical investigation into the district planning that has resulted in a specific semi-public front yard zone along the streets. The approach in total thus leads to a proposition of intervening these front yard zones in the district. It experiments with how by intervening a street boundary, could the sensitive semi-public strip be redefined to induce a more integrated community.
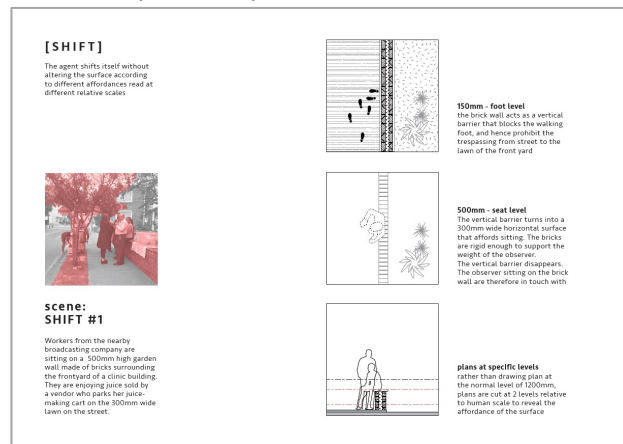
(fig.1 Horizontal sections of wall cut at specific levels)
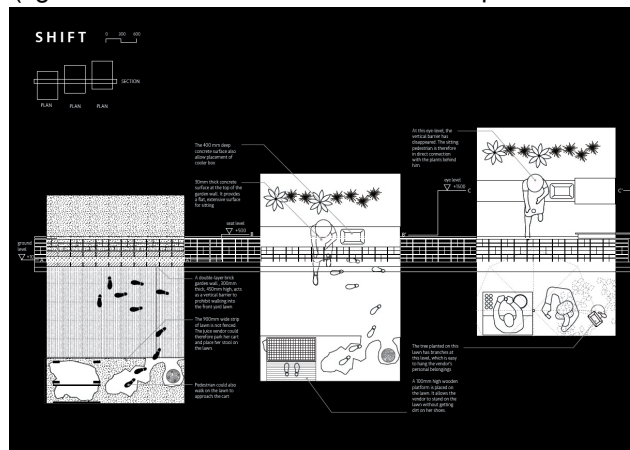
(fig.2 Multi-perspective drawing on the symbiotic relationship found at the wall)

While methods of praxeology also enable one to study how people behave on the street, the less anthropocentric thinking of urban ecology supplements the investigation with concurrent attention to the physical environment, followed by how it enables inhabitation, and how it is inhabited, modified through time. Hence, the choice of urban ecology addresses the wholeness that this study pursuits, which are the spatial, behavioral and temporal context that construct the complex streetscape. The urban ecological approach also dims the singular authorship of the practitioner, allowing one to approach the streets as an agglomerated construction by different organisms and their actions in the urban ecosystem.

In the field of researching our built environment through urban ecology, there has been a rising discussion about "affordance", which has brought a new light in evaluating the capacity of our public realm. In the past decade, there have been practitioners adopting this theory as an approach to their research. Erik Rietveld (Dutch practitioner in RAAAF Studio), for instance, once written how by researching through affordance could reveal to designers the unconventional ways to inhabit our environment in 2014.[7] The study of affordance in Rietveld's terms, could therefore be read as the relation of a physical characteristic of the environment and an available skill within the socio-cultural practice of a community[8]. Such methodology challenges the authorship in the architectural field. It implies architecture is not defined upon its completion, but requires analysis of how people interact with it in reality. The research is therefore scripted with a certain multiplicity and spontaneity, that might leave the research too objective and open-ended. To sharpen the research findings with reference to a local community, one could not over rely on sorting out the affordances in an environment. It requires a methodological reflection, to look for other qualitative lens that could ground the findings in the socio-cultural context of Bogota.


III. RESEARCH-METHODOLOGICAL REFLECTION

The genesis of urban ecological thinking applied in the architectural research will be discussed as an intersection between the two disciplines, ecology and architecture. Ecology first emerged as a specific discipline in the 1900s that centered around the equilibrium of the nature systems.[9] It mainly involves scientific study of interrelations among organisms and their physical surroundings. While ecologists had been focusing on investigating ecosystems that is less anthropocentric, researchers in sociology like the Chicago School of Urban Sociology began to implement ecological theories in their study of the functioning of cities. This paved the way of a subdiscipline, urban ecology to emerge under ecology around 1970s, which coped with the increasing impact of human exerted on the natural environment.[10] Urban ecology does not only approach the urban context through the interrelations among people and their surrounding environment, but also involves social science which is crucial in human settlements.

Meanwhile, the field of architecture had also started to intersect with the field of ecology. In CIAM X Congress (1956), Team 10 had already brought the ecological approach to the study of urbanism. They issued *The Doorn Manifesto*[11], which introduced a concept of "habitat" from ecology. The habitat does not limit to a particular house that a human inhabit, but the particular community around that house. For instance, Team 10 member Alison Smithson did not confine her study of "mat-buildings" in forms, but stretched to its process of growth and change in relation to its cultural identities, surrounding urban qualities.[12] Application of ecological theories was also seen in the later Landscape Urbanism lead by James Corner and Charles Waldheim since 1997.[13] They approached the research and design of landscape through the dynamic interrelations of different user groups and the urban landscape.

While the previous approaches have already acknowledged the instability and multiplicity of our built environment, some researchers are still in search for a more qualitative method to understand the spatial qualities that shape the interrelationships. Stanford Anderson (American architectural historian, 1934-2016) extended the method to a multi-layer analysis of the public realm. He devised a theoretical

framework of "sympatry", which originated from ecological studies, to read the streets. In contrast to a normal understanding of territory as "defensive territory", the ecological understanding as "sympatry" addresses actual sharing of same region by different user groups.[14] The public realm in his study *Space of Public Claim*, is therefore seen as a set of overlapping behavioral patterns between private and public (fig.3), which is a symbiotic territory that sympatry infers. The notion embedded in such method therefore opposes the absolute definition of street boundaries on district maps.
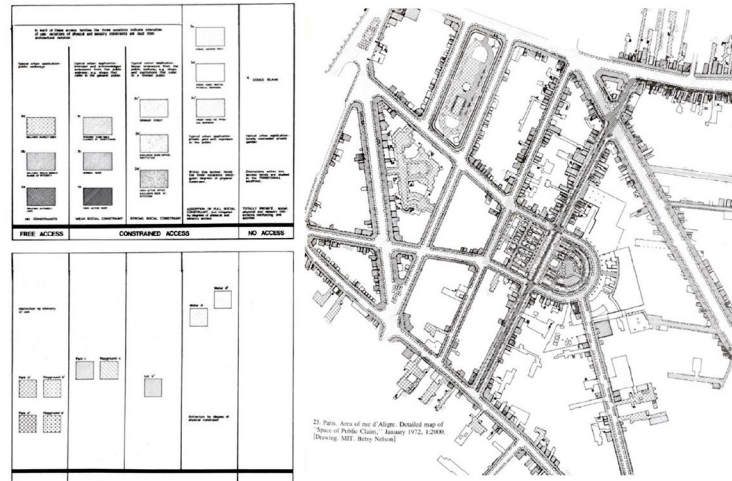
(fig.3 Detailed map of Area rue d'Aligre, Paris from *Space of Public Claim*)[15]

Anderson's method leaded to a self-discovery of how different parties interpret the same built environment. Following this line, the research of Rietveld substantiated this system of knowledge with a closer focus on perception and locomotion level. Based on Gibson's concept of affordance, the ecological perspective to see the physical opportunity of the environment, he studied how people perceive and therefore intervene the built environment with creative ways. The method of affordance, also added a socio-cultural layer to his research. He argued, without considering the existing normative practice of a user group, it is impossible to transform this resilience of environment as a design tool. He deemed that in the view of ecology, the environment offers unlimited affordance, which has to be analyzed selectively[16]. Only by distinguishing the normative way interacting with the environment, and especially those which deviate from the norm, could we devise new ways appropriating the environment.

This research approaches the multiple uses of street by developing upon the multi-layer approach of Anderson and the theoretical framework of affordance refined by Rietveld. Firstly, the analysis unfolds the physical potentials that constitute the sympatric ground. Secondly, it adopts the theoretical framework of affordance which allows the former observations to be interpreted with reference to the socio-cultural context of Bogota. The way Anderson did justice to all the user groups who define the boundary of the street, without hierarchy, provides me a solid way to dissect the multiplicity of authorship on the street. His method however, remains in city-scale that still hinder oneself from learning the spatial qualities that produce such multiplicity. Hence, I selectively adopt his overlaying reading of the street, and adjust it to an empirical study of street surfaces. Yet, this only provides the materials in responding the question of how to design an open-ended environment that could cope with different interpretation of users. It could be sometimes too overwhelming to operate with such multiplicity. The framework of affordance of Rietveld thus offers a qualitative filter that let me extract those physical potentials which are not yet normalized in the existing culture. Through this idea of latent potentials, the spontaneous use of the open-ended street could therefore be solidified into a set of physical conditions, which could be studied systematically.

IV. POSITIONING

While unfolding the obscured possibilities afforded by the street surfaces, this research is critically aware of avoiding a mere open-ended presentation of spatial potentials. This draws attention to the criticalness of the researcher in terms of historical and cultural awareness, which has been questioned in the lecture. Owing to my qualitative approach taken under the wide ecological spectrum, it implies subjective judgement when the relationship between physical facts and its use is being devised. Hence, the position taken in this research is never a neutral ecologist who only documents the abnormal relationship between certain species and the street. Instead, this research aims to reflect on these abnormalities in relation to the existing predominant practice.

With such caution in mind, I look for a critical apparatus to interpret the discovery of multiplicity of the street. While Anderson offered a new lens to extract the latent potentials of the public realm, the implication for applying such revealing discovery to an existing community is weak. However, the societal norms of a particular community is a major constraining factor that restricts the realization of latent potentials. In terms of affordance, the existing norm decides what affordances of the street surface are being popularized, while the other affordances are subordinated. Therefore, the research position is substantiated with Rietveld's framework, which simultaneously considers the existing norms that determine the exploitation of potentials in our environment.

Embodied in the urban ecological assessment of the physical potentials, which could stimulate appropriation by users on the street, is already a notion that architecture could embark spontaneous interactions and unexpected encounters. There have already been discussions among architects like Herman Hertzberger[17] and Aldo van Eyck, about the possibility of researching and even designing spontaneity beforehand. The built work of van Eyck, who contributed to the core research of Team 10, have raised some intriguing discussions. Some practitioners doubted the efficacy of the open-ended usage that van Eyck had crafted in his Amsterdam Orphanage. They questioned whether the furniture embedded at the corner conditions served as a stimulus to new usage invented by kids, or an impediment to their creativity.[18]

Another issue deals with the existing limit of scale regarding this trait of urban ecological research approach. So far, the thinking of affordance seemed to be only applicable at the scale of planning. It is especially seen in landscape projects, which has a more instable site than architectural projects.[19] The everchanging nature is assumed to have more resilience than buildings, to cater multiple affordances. My urban ecological approach to the research of streets, aims to challenge this limit of inscribing spontaneity by pushing it to the scale of architecture. Although spontaneity and designed architecture seemed to be paradoxical, the gist of such research lies in the approach opted. In this research, the question lies not in measuring and quantifying the unpredictability found on streets, but to understand how an instable definition of environment would benefit the diversity of a community. This echoes the empathic position of the Methods and Analysis graduation studio. By thinking through the instability and multiplicity of the environment, it provides an alternative to the definitive ideal as planned by the authorities.

The attention of this reflection centers around the multiplicity and spontaneity of research, which are embedded in the question – how architecture could communicate openness in interpretation of public realm. Through reflecting on the methodological choices in addressing the above challenges, the justifications have reinforced my position in terms of authorship in architecture. The choice of an urban ecological approach to study the actual engagement with streets, is an opposition to the binary definition of street versus building, public versus private. Its emphasis on interrelations between people and urban environment lowers the arrogance of the architect as the sole creator[20]. The blurred boundary of street, as seen in the sympatric interactions analyzed, is probing into the univocal definition of our built environment. I believe the value of an environment and its community is measured in terms of meaningfulness, rather than the definitive setting designed by the practitioners. Meaningfulness relies on the capacity offered by the environment, which allows people to project their

own interpretation and hence their own way of inhabitation onto it. While this openness looks intangible to grasp, the findings have signaled how practitioners could actually craft room and conditions for this diversity. The value of architectural design, therefore, is perceived as its ability to empower people to give a building its specific identity, rather than a model definition prescribed by the practitioner.

[1] Linda N. Groat and David Wang, *Architectural Research Methods* (John Wiley & Sons, 2013), 8.

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[4] Jari Niemelä, *Urban Ecology: Patterns, Processes, and Applications* (Oxford University Press, 2011).

[5] James Jerome Gibson, "The Theory of Affordances," in *The Ecological Approach to Visual Perception* (Lawrence Erlbaum Associates, 1986), 127–37.

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[9] Niemelä, *Urban Ecology*, 5–13.

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[15] Anderson, Stanford.

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[17] Herman Hertzberger, *Lessons for Students in Architecture* (010 Publishers, 2005).

[18] Peter Beek and Anouk de Wit, "Affordances and Architecture," in *The Third Exile: Explorations in the Borderland of Architecture, Visual Art, and Philosophy of Science*, ed. Joseph Semah and J.A.G.M. Rutten (Amsterdam: Arti et Amicitiae, 1993).

[19] Rietveld and Reitveld, "The Paradox of Spontaneity and Design: Designing Spontaneous Interactions."

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