

## Self-Positioning Paper on Research Methodology

An ecological understanding of urban surfaces and affordances.

### Introduction

We often take things for granted. Once accustomed to a system, the design approaches which should vary according to the changing context is passed into oblivion. It is certainly the responsibility of architectural practitioner to build clarity regarding what can be addressed through his/her project. Through a series of heuristic process of collecting information, defining research questions, determining a few specific methods, coming up with hypotheses, etc., we could find our own position consciously. Furthermore, I wonder how my academic research could dedicate to the existing knowledge system and serve the others. As what Jorge Mejía quoted from Stanford Anderson in his talk, "I claim that the architect's problem is not how to found his knowledge positively but how to make his knowledge grow." Once we have the ability to debate our thoughts within the larger architectural system of knowledge and understand the differences in between, the communicative capacity of architectural practices it offers for interaction with the built environment will come afterwards.

After the seven weekly sessions and the participation of the group work discussion, I am aware that how different research methods have led to disparate results despite working on the same topic. Moreover, I gained the perspective in relation to the importance of establishing a systematic framework before developing further studies. This framework applied to not only the present relevant information but also the historical contexts and its implication.

The objective of my graduation project<sup>1</sup> is to explore the urban surfaces that are contributed by different agents, such as human, nature, animal, etc. These surfaces are characterized by interactions of the urban environment that has taken place naturally. The autonomy of the interactions unfolds how the surfaces could afford actions which we seldom pay attention to. Through the study of affordances in multiple dimensions, we will be able to acknowledge the emotions between surfaces, as well as the notions of public realm which integrate the different communities within the city.

This year, the graduation studio of the Chair of Methods and Analysis focus on the urban context of Bogotá, the capital of Colombia. Based on the experimental attitude of the intervening in the complex urban condition, our research choices have been conducted upon meaningfulness, appropriation, and integration<sup>2</sup>. Hence, how to contextualize my analysis within at least one of these three themes is, in fact, the first key of formulating the research questions. Relating to the theme of integration, the research question is: how the urban surfaces support multiple affordances when being perceived by these different agents which coexist? As for the theme of meaningfulness: how could we communicate these usually masked affordances of other scales to the public in architecture? Moreover, how can we learn from the infra-ordinary<sup>3</sup> which are often disregarded, bringing alternatives which articulate the common ground among the different groups through the medium of surface?

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<sup>1</sup> Hiu Ching Debby Lam (student number: 4717120) and I work in pairs for the fieldwork study under the Chair of Methods and Analysis 'Position in Practice' studio. I declare that this essay is an individual and original work. In the research stage, I am more focusing on the horizontal surface and she is working on the vertical surface.

<sup>2</sup> According to the studio booklet of the Chair of Methods and Analysis, the further explanations of the following three terms are: meaningfulness, the communicative capacity of the built environment; appropriation, private-public-communal; integration, the city's ability to cater to multiple variables.

<sup>3</sup> The French novelist, Georges Perec described in his book: 'How should we take account of, question, describe what happens every day and recurs every day: [...] the common, the ordinary, the infra-ordinary, the background noise, the habitual?'

## Research-Methodological Discussion

In the meantime of defining my research methodologies, it is crucial to define the key terms. What constitutes the term shows how we could interpret our idea by selecting the specific lens according to its paradigmatic analyses. Furthermore, this way of narrowing down our research approaches is always contingent upon what I project my position to the graduation project. Firstly, what is urban surface<sup>4</sup>? Urban surface is the uppermost layer of the city where accommodates buildings, street, open spaces, and inhabitants. This layer is not only recognized as the functional paved ground but also seen as the setting for scenes to happen; a stage for unfolding events (Wall, 1999). Extending from this point of view, I referenced the concept of affordances which is closely associated with the ecological system. Secondly, how should we understand affordance? James J. Gibson introduced this term in his book: 'The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill (Gibson, 1979: 127).' This is to say, the affordances, such as the support of the surface shows the capacities related to the behavior of inhabitants. Reflecting the concept of affordance on my graduation project, I view the inhabitants are connected to the surfaces directly both in visual and spatial perception through their actions and postures, the ground starts to participate in our social everyday life. For James J. Gibson, besides the abstract properties, affordances can be measured related to animals in physics, such as a horizontal surface at knee-level that affords sitting. Hence, I try to dissect the surfaces with multiple sections and plans at different levels, for example, the ground-level, the foot-level, the seat-level, etc., which illustrate how affordance is perceived from microscale to macroscale, helping us to read the complexity of the overlaps constituted by actions. Similarly, the external agents which surfaces afford could also alter the surfaces, changing its affordances to facilitate interactions carried by itself or even the other agents.

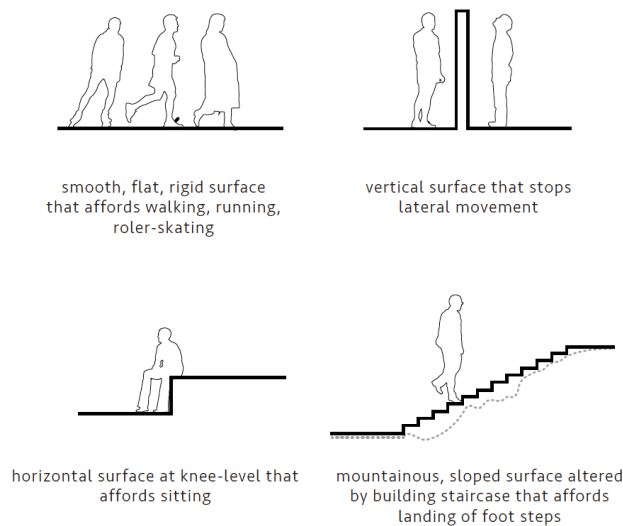


Figure: Using human as the example to shows that different layouts afford different behaviors  
(Hsuanya Kao & Hiu Ching Debby Lam, 2018)

<sup>4</sup> Taking the limitation of the length into consideration, I will skip the process of how I had been deciding which definition (interpretation) of the term I used as the starting point of my graduation thesis.

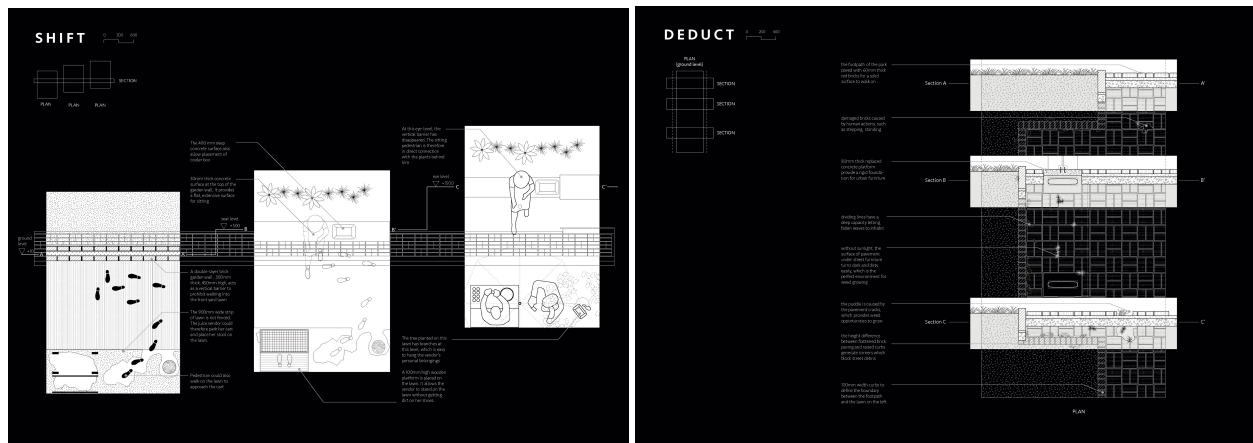


Figure: Multiple sections and plans as one of the research methods to dissect the affordances (Hsuanya Kao & Hiu Ching Debby Lam, 2018)

Instead of beginning with the discourse of affordances, the study of ecology will be the first step of my literature review, more precisely speaking: urban ecology. Modern urban ecology as a sub-discipline of ecology which integrates multiple dimension of urban ecosystems (Niemelä, 2011: 9) and stresses the interrelations between mankind and their environment; a reciprocal relationship rather than a unilateral domination. For instance, the most well-known Concentric Zone Model applied to Chicago done by Ernest Burgess illustrated a radial expansion of the city, the tendency from the inner zone to the outer zone next to it (Park & Burgess, 1925: 51). While a lack of ascertaining between scales of inhabitants and its surrounding limited the early development of urban ecology. In order to complement this section, there are two directions of present state-of-the-art relating to my research questions can be drawn with regard to the awareness of urban ecology.

First of all, the surfaces as the stage for locomotion and supporting the movement in the context of the built environment will be employed to investigate the interfaces on which the external agents act. The affordance research of Erik Rietveld (RAAAF) can be seen under the framework of ecology that pointed out the behavioral patterns embedded in sociocultural practices shows the form of life (Rietveld & Kiverstein, 2014). Another direction is the material culture which characterizes the paved surfaces, sending the message to the public. The material itself and the weaving process consist of behaviors and landscape are central to perceive the hidden traces of social and cultural environment. This material surface, as a palimpsest in which we can read all the layers, such as historical identities and functional capacities (Tim Ingold, 2004). Except for the above two directions as the main research methodologies, to understand how the autonomy of the interface takes place within the thickness of the surfaces, the literary methods such as the first-person monologue that gives non-human objects personalities will contribute to the design tool of my graduation project.

### Research-Methodological Reflection

To understand the transformation of urban ecology as a research methodology in the architectural realm, let us start with its historical development. The CIAM held the 10th conference at Dubrovnik in 1956, firstly putting forward the ecological thinking in architectural discussion. They viewed the city as several coherent systems and international networks rather than a collection of contrasting buildings<sup>5</sup>. After that, the end of CIAM reformed a new group: Team 10, which rebelled against the concept of Functional City. Two of the crucial members, the British couple of architecture, Alison and Peter Smithson identified 'The house, the street, the district, which have their own characters respectively, shaping the reality of the

<sup>5</sup> *Habitat: Expanding Architecture*, the first in a series of Total Space programme installations in Het Nieuwe Instituut, Rotterdam.

non-demonstrative society (Smith, 1968: 76). However, Stanford Anderson rather emphasized the relations between individuals and populations which are reciprocal, it means that the inhabitants also can change the environment. Extending from this notion, the rise of what he called: 'the setting for sympatric relations' (Anderson, 1986: 3) began to rather view urban ecology system as a whole but to a concomitant of the sharing occurs in the same geographic area by different inhabitants. In that sense, urban ecology as an architectural research methodology provides another possibility that suggests both 'continuities and discontinuities' (Anderson, 1986: 4) between inhabitants could be the meaningfulness in the environment while generating a series of liberating actions beyond time and space.

In 'A Rich Landscape of Affordances', Erik Rietveld and Julian Kiverstein argued the previous study has tended to neglect the particular purpose of abilities in the environment which is the notion of human ecological niche shaped by the richness of social practices. They stated: 'An ecological niche is built and transformed by members of the species through the species' typical ways of acting. All animals actively modify their niches, (...) (Rietveld & Kiverstein, 2014: 328)' Accordingly, affordances marked another inevitable discussion of praxeology, namely the study of human action and conduct. Praxeology thus conceptualizes the existence of affordance that is related to a particular situation. This understanding generates a need for studying the sociocultural practice consists and zoom in on the layering affordances.

As for the study of material culture as both theoretical and practical approaches to precisely analyze not only the materials itself but also the story behind them. The term 'material culture' was first used in the *Oxford English Dictionary* in 1843, which is an interdisciplinary field including humanities, history, anthropology, etc. It was not until the 90s that the *Journal of Material Culture* started catering for the scholar study in this field. In fact, it is difficult to only establish a single method to approach the materiality, therefore I will use this issue as a non-verbalized<sup>6</sup> engagement between inhabitants and the built environment. Moreover, raising a question: 'how to construct the common grounds among a large number of textures of the surface, and each of them has certain property (Ingold, 2007)?' The Brussels-based 51M4E tried to deal with the commons in Skanderbeg Square located in Tirana by linking this public space to visitors' familiar aspect which creates a sense of togetherness (Persyn & Schmidt: 2017). They investigated all the domestic stones and used them as main pavements in the project, this turning the local material to a sharing dialogue in the future.

Considering urban ecology as the dialectical method to widely question the role of surface, it is clear that by using the study of affordance or material culture as filter shifts the quantitative research which usually involves plenty of participants and database (Lucas, 2016), such as the initial concept of urban ecology, to the qualitative one. On the other hand, they are both simultaneously narrowing down the focused area from the infinite openness: the possible unrecognized environment which has not interpreted by inhabitants yet to a relatable scale within our everyday practices, and further carry out the capacity of surface as the medium to convey the readable multiplicity and arouse public consciousness.

## Positioning

The second talk on Praxeology given by Marieke Berkers and the fourth talk on Material Culture given by Eireen Schreurs inspire me the most, then these inspirations are projected onto the constitution of my position. Berkers mentioned the importance of using praxeology study as a method to develop the proposals for actual users. As one of the related discourses to praxeology, ergonomics embodies the sensory experience of human body in physical reality. Therefore, the first position I adopt is that architecture is not only about developing a spatial intervention but also capturing the matter of

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<sup>6</sup> *What is Material Culture?* A lecture given by Dr. Sophie Woodward in the University of Manchester.

temporality, such as an interactive moment when the raindrops accumulate in the pavement cracks caused by human actions. These temporalities are bare to be perceived from only one vantage point (Ingold, 2004). The role of architect as an observer is committed to digging deeper from historical condition to contemporary context in multiple ways in order to provide one or several leads which could imply the agents of surface in a perceptible level. The German philosopher, Walter Benjamin also referred to both historical condition and nature are influential in the achievement of organizing the human perception (Benjamin, 2008). From this aspect to analyze the particular situation, the affordance which takes place in urban surface can play a part in facilitating the positive publicness.

Material culture is another useful approach to inquire about the communication between human or non-human inhabitants and the surroundings. Schreurs highlighted the social, functional, and symbolic meanings of materials that reinforce architecture as a self-evident thing. Yet, how should architect treat the process for a building from the raw material? By using ethnographic methods, for instance, observation and participation to look at the continuity of materials allow us to get past the limitation of time and space. This material-based narrative, concretely impacts how and when does the particular situation happen? Through the sense of tactile, auditory, and visual, we can thereafter find alternative perspectives to understand cultural, social, and technical relations. It further calls for the new thinking with a continuous surface (Gabrielsson, 2008) which redefine the professional position of architect could move beyond the fulfillment of a number of requirements (Avermaete, 2016).

One striking question is that how to bridge the communication gap between architect and actual users. Aligning with the general approach of Chair of Methods and Analysis which engages in an idea of commonality, the architect holds the opportunities to create the collective value. This collective value is something I aim to bring into an in-depth discussion in my graduation project; although the current situation is challenged by those who are able to pay and dominating the first appearance. Rather than supposing that the architect works on the built environment to clarify the common identity, I would go for the exploration of both sides of the coins and evoke the concerns of a sharing scenario. In other words, this position is associating with multiple perspectives to rethink the role of architect. Affordances, representing a form of human or non-human lives, consists of the pattern of daily practices which provide potential alternatives in public spaces. The architect who shaped the landscape and pedestrians of the Acropolis of Athens, Dimitris Pikionis showed the balance between architecture and nature by being aware of human behaviors.<sup>7</sup> In this project, the layout of the paved surface was imbued with emotional, spiritual, social, and functional interpretation as well, points out a potential intimacy perhaps not only between citizens and the holy landscape but also the broader layers.

Undoubtedly, the marked vocation of architect is to be a mediator that articulates the public tendencies and advocates the social equilibrium; the reason why I have been researching the prospect by using surfaces as interventional means and following the ongoing logic of the site, in a way that somehow creates a softer encounter within the local context. Nonetheless, we as 'informed outsiders' have asked to foster a meaningful, empathetic built environment regarding the political character of architects (Avermaete, 2010), it is either sending a message of sympathy or imposing the groundless imagination to the public. Consequently, all the epistemic findings in terms of urban ecology and its related discourse can inform us the necessity of self-awareness which enables architects to have an eye for comprehensive understandings and render a proposal to cross the insurmountable obstacles.

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<sup>7</sup> In his writing: 'A little more humanity, a deeper understanding, a finer sensibility is enough to change all — from the initial stance down to the smallest detail.'

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