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ARCHITECTURAL SKETCHES: THE SKILL IN THE FIELD

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resumo

Os croquis são comumente vistos como ferramentas importantes no processo de projeto em arquitetura. A perspectiva tradicional encara o croqui tanto como ferramenta de organização como artifício formal na busca da melhor solução para um projeto, esteticamente e programaticamente. (Lawson in: Edwards, 2005, p. 273). Podemos considerar, com efeito, que os croquis tem o potencial de contribuir em grande medida na concepção arquitetônica de um edifício. Embora concordando com esta visão, a questão em torno da qual o artigo desenvolve-se é a "construção" de uma habilidade do arquiteto, a de desenvolver e sofisticar conceitos por meio da atividade de traçar marcas no papel, ou seja, fazer croquis. A argumentação desdobra-se em dois estágios: no primeiro desenvolve-se a idéia de que desenhar é uma habilidade adquirida e desenvolvida por meio de esforço ao longo do tempo; no segundo sustenta-se que esse esforço é realizado sob a lógica de uma ou mais narrativas, dentro das quais o croqui assume seus sentidos e significados. No primeiro estágio o conceito subjacente é o de que, como ferramenta, o croqui transforma aquele que o desenha; o segundo estágio examina alguns aspectos desse processo sob a perspectiva da influência das narrativas.

abstract

The architectural sketch is commonly viewed as an important tool in the architectural design process. The traditional approach is that the design sketch is both an organisational tool and formal device in the search for a best-fit solution, aesthetically and programmatically. (Lawson in: Edwards, 2005, p. 273) We may consider that the architectural sketches have the potential to contribute in a great deal in the conception of a building. Although I entirely agree with this position, my preoccupation regarding the architectural sketches, nevertheless, goes quite in the opposite direction. Here I intend to explore the role of sketches in the construction of a specific architect's skill, the ability to develop and sophisticate concepts through the activity of tracing in the paper, i.e. sketching. The argumentation presented here unfolds in two stages: in the first it is developed the idea that sketching is a skill acquired and sophisticated through effort and time; in the second stage it is sustained that this effort is made under the logic of one or more narratives, inside which it assumes its senses and meanings. In the first stage the underpinning concept is that, as a tool, the sketch transforms the one who sketches; the second stage examines some aspects of this process inside the logic of narratives.

resumen

El croquis en arquitectura es comúnmente visto como una importante herramienta en el proceso del proyecto arquitectónico. En el planteo tradicional el croquis es considerado tanto como una herramienta organizacional como un instrumento formal en la búsqueda de la mejor solución para un proyecto, estéticamente y programáticamente. (Lawson in: Edwards, 2005, p. 273). Efectivamente, podemos considerar que los croquis tienen el potencial para contribuir en gran medida a la concepción arquitectónica de un edificio. Aunque estando de acuerdo con esta visión, la cuestión alrededor de la cual se desarrolla este artículo es la “construcción” de una habilidad del arquitecto, la de desarrollar y sofisticar conceptos por medio del trazado en el papel, o sea, haciendo croquis. La argumentación se desdobra en dos etapas: en la primera se plantea la idea de que el dibujar es una habilidad adquirida y desarrollada por medio de esfuerzo a lo largo del tiempo; en la segunda se hace hincapié en que ese esfuerzo se realiza bajo la lógica de una o más narrativas, dentro de las cuales el croquis asume sus sentidos y significados. En la primera etapa, el concepto subyacente es el de que, como herramienta, el croquis transforma a quien lo dibuja; la segunda etapa examina algunos aspectos de ese proceso desde la perspectiva de la influencia de las narrativas.

I. acquiring the skill

i.i. sketches interpretations

There are at least two main interpretations about architectural sketches. On the one hand, there are those who believe that drawings are a means to simply register what is already delineated in the mind. On the other hand, it is often understood that one of several epistemological properties of study drawings is that they generate information within the design task by means of graphic processes. (Herbert, 1992, p. 28) This article is in line with this last assumption. Here I will address the graphic process within a perspective in which one of the roles of making architectural sketches is to develop and deepen the inner world of the architect, which in turn, is something that contributes to the conception of the built world. In other words, it may have an important role in the imagination and visualization skills of an architect, as well as in the complexity and deepness with which he/she is able to conceive architecture.

The standard definition for sketches describe it as the kind of drawing architects use to produce when they are studying the solutions in the process of designing a building. Regarded as the mythological start of architecture (Krasny, 2008: 150), these handmade artefacts are still considered an important tool in the architectural thinking process, even in a time when digital resources are widely popularized. (Edwards, 2005) Etymologically derived from Greek *skhedios*, meaning unprepared, and from Latin *schedius*, meaning hastily made, the term signified something unprepared, incomplete, raw, rough and unpolished as well as a short notice. (Jonson, 2002: 248) In addition, sketches do not follow any kind of rule system to which other kinds of drawn representations must follow, and has no compromises with parameters like scale, proportion, although it may incorporate it as well.

Being material artefacts, they have the property of imposing their own physical presence and influence (Fraser, 1994: viii). Architectural sketches may be seductive by the property of suggesting a lot, without fixing anything definitely. They are open to many interpretations, pointing towards many possibilities. They may amalgamate hard elements of reality, such the structural behaviour of a constructive element with poetic elements like bird wings or sailing ships. When we see for instance, the drawings Jorn Utzon made for the Sydney Opera House (1957), we may feel that they suggest in a great deal the image of immense seashells overlooking the Sydney Bay. These powerful images integrated a project that eventually won a competition, later revealing to be non-executable as they were represented through the drawings. The engineering office Ove Arup took six years to solve the constructive problem. (Montaner, 1997, p. 106). The budget ended up being higher than imagined, but what remained was a monument with such an impactful image that it became one of the icons through which Australia is now recognized worldwide. The same occurred with Brasília Cathedral (1959), designed by Oscar Niemeyer. Its form has been sketched suggesting a

form that could be shaped with only one structural piece, a curved concrete element that, repeated 14 times in a rotational shape, would constitute the entire spatiality of a cathedral. The process of materializing it took the engineers around a decade also, but brought to the world a paradigmatic image of the Brazilian federal capital. These episodes, mentioned among many others, seem to illustrate to some measure the materialization power of architectural sketches. Being a part of the explanation, the extraordinary power sometimes assumed by suggestive sketches is something to be deeply understood in the processes of making them and what this activity has been able to operate in the architect's minds before impacting in the material world.

The sketches and sketchbooks legacy of Le Corbusier were perhaps the most influential set of drawings amidst the architectural field during the second half of the XXth century. Although he was a skilful draughtsman, his drawings often violated perspectival conventions or distorted proportions, once great part of his concerns were not of representing reality or envision architecture with a mathematical precision, but rather to reach, through the act of drawing, a state of deep emotion, a possibility to connect to some "inner force". (Fraser, Henmi, 1994, p. 2)

i.ii. sketch as a craft

Despite the poetic and magic dimension that this "inner force" may assume, there are some features involved that are strongly related to material aspects. This has to do with the craftsmanship nature of sketching. As mentioned above, some aspects are implied in the sketching activity which are not precisely the drawings per se, but has to do with the process of making them, what I call the craftsmanship aspect of the activity. Considering the issue of craft, Sennett reflected about what the process of making concrete things reveals to us about ourselves. (2008:8). A craftsman/craftswoman is a person who is skilled in a particular craft. The idea of skill is one of something that has been constructed through time. Sennett mentions the cipher of ten thousand hours as a common touchstone for how long it takes to become an expert. This seemingly huge time span represents how long researches estimate it takes for complex skills to become so deeply ingrained that these become readily available, tacit knowledge. As he ponders, this number is not really an enormity, being translated in the seven years of apprentice work in a medieval goldsmithy, five hours of bench work each day (2007, p. 172). Such a period of time employed in a craftsmanship has necessarily the effect of transforming the mind and the body, the head and the hand.

The transformational process requires effort and attention. A triathlon athlete, for instance have to spend a meaningful amount of time in training the three sportive modalities: swimming, cycling and running. He/she must also adjust his sleeping routine, his nutrition habits, etc... At the end of the process, in the competition day, he/she is not the same person that started the training months, or even years before. In the process of competing many

times, as the years go by, the body, the mind, the emotions are transformed, and the athlete becomes his/her own oeuvre.

Similarly, sketching is a physical activity that shapes the architect. It is in this spirit that Pallasmaa registers his experience:

"As I sketch a contour of an object, human figure or landscape, I actually touch and feel the surface of the subject of my attention, and unconsciously I sense and internalise its character. In addition to the mere correspondence of the observed and depicted outline, I also mimic the line rhythm with my muscles, and eventually the image becomes recorded in the muscular memory. In fact, every act of sketching and drawing produces three different sets of images: the drawing that appears on the paper, the visual image recorded in my cerebral memory, and a muscular memory of the act of drawing itself. All three images are not mere momentary snapshots, as they are recordings of a temporal process of successive perception, measuring, evaluation, correction and re-evaluation. " (2008: 90)

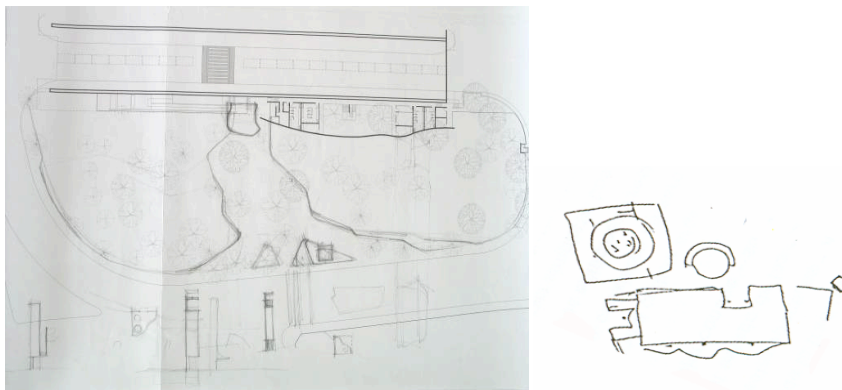
Le Corbusier believed that drawings served as a means to become "passionately involved", that is, to enter into a kind of intuitive communion with the object of the drawing. (Fraser, Henmi, 1994, p.2) Could we suggest that the state of mind poetically described by Le Corbusier refers to the capacity of entering a subject so deeply as to understand intrinsic aspects that are not clear at a first sight, or when examined more briefly? Sennett sustains that the ability to concentrate for long periods comes before the comprehension of a subject, or a discipline. The ability to concentrate for long periods, the skill of physical concentration would follow rules of its own, based on how people learn to practice, to repeat what they do, and to learn from repetition. (2007, p. 172)

It seems a relevant matter to reflect upon what makes a person, an apprentice, without skill and without understanding of a subject, persist in the process of doing something. In architecture, although this is not at all an exclusive feature, reflecting about a subject that is still unknown consists in the very nature of the profession. The design process is always a process of knowing and creating something that was not clear or didn't exist at the beginning of the process. In order to respond that we could say that inspiring buildings, architects and, of course, architectural drawings and sketches, may serve as moving forces for someone who is a candidate to acquiring architectural skills, or a professional developing a new building project. A way to discuss the question of what is inspirational for each one is to understand it as an inner process in the context of the power of narratives, being them considered those thought structures that constitute the worlds in which architects/draughtsmen act and develop their skills and, as a consequence, themselves.

II. the skill in the field

ii.i. sketches and narratives

To further develop this idea, I use the perspective constructed by Balinisteanu in *States of Fancy: the role of fantasy and narrative in constructing social worlds*. (2008:5). The author's claimed theoretical argument is that identities are fantasised in the recesses of the mind. In order to express these fantasies, and thus flesh out our social identity, we cite, to an extent, from other's narratives. These acts of citation shape our perceptions of ourselves and of others as we negotiate, helped by these narratives, subjective identities and acceptable socialisation scenarios. In architecture, sketches may well consist in acts of citation. See for instance the dialogue between the sketch made for Lapa bus terminal by the architect Luciano Margotto and Alvaro Siza's Aveiro Library. (Perrone, 2005)



Lapa Bus terminal organic shaped wall and Siza's Aveiro Library organic shaped wall

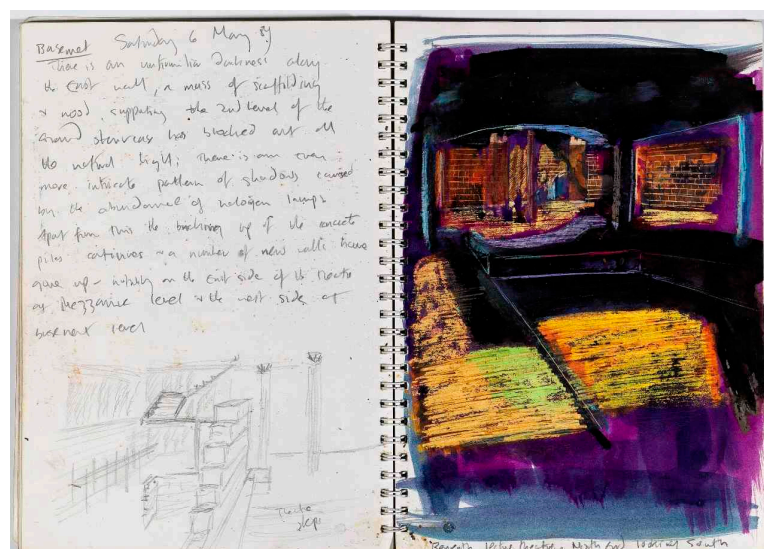
These negotiations can only take place in social interaction where we become acquainted with voices that we can cite.(p. 1) It seems plausible to consider that, one of the things that move the architect through the development of his skill of thinking through drawing is fantasy. So what Le Corbusier once mentioned as "becoming passionately involved", and what I referred here to as "inspiration", perhaps could be better explained in terms of "fantasy". This idea is derived from Balinisteanu's proposition that our modes of socialisation are steered by fantasies that come from narratives.

In line with Derrida's and Butler's conception of subjectivity as something unstable and amenable to change through reiteration, Balinisteanu think of subjects as always incomplete, challenging claims of subject's immutable or essential identity. The author argues that the fantasy of the self is constitutive of the subject, expressing the self's identity in sequences of images which can be regarded as narrative sequences and not just unarticulated events of imagination. These narrative sequences inform the subjectivity constructions, being every subject constituted through citing legitimate subjects in narrative presentations of the self. If, through using narratives, one's fantasising of a given scenario and subjective constitution is

repeated, then, in time, one's body learns to be awakened to ways of feeling and experience that these narratives make available. One will then enact complexes of gestures, bodily postures and words that one has grown accustomed to fantasising as one's own. (p. 3)

ii.ii.sketches and Bourdieu

The considerations Balinisteanu develops about fantasies are to some measure indebted to Bourdieu's theories. To make this point clearer I mention the three main thinking tools, as denominated by Bourdieu & Wacquant (Maton in: Grenfell, 2008, p. 52): *habitus*, *field* and *capital*. To illustrate the concept of *habitus*, Maton suggests that experientially, we often feel we are free agents yet we base our everyday decisions and assumptions about the predictable character, behaviour and attitudes of others. The author remembers Bourdieu's statement, "all of my thinking started from this point: how can behaviour be regulated without being the product of obedience to rules?" (p. 50), to delineate his own approach according to which *habitus* conceptualizes the relation between the objective and subjective or "outer" and "inner" by describing how these social facts become internalized. It is how the personal comes to play a role in the social - its dispositions underlie our actions that in turn contribute to social structures. (p.53). Moore will remember that those with the well-formed *habitus* are higher in cultural capital (that we will discuss further on). Nevertheless, not all *habitus* and their instances of cultural capital are accorded equal value in society - for example that of the artist versus that of the craftsman. (Moore in: Grenfell 2008, p. 103). It is very frequent the idea that architectural sketches deal with erudite and creative speculations and not with daily and boring technical problems of everyday, that could be more associated with a lower status *habitus*. Sketches may serve, to an extent, to improve and make evident the designing skill of the architect/draughtsmen, as eloquently shown in Venturi's sketch for the Sainsbury Wing (fig. 3) in the National Gallery.



Robert Venturi's sketchbook page of 1989. Studies for the Sainsbury Wing, National Gallery, London. (RIBA Library Drawings Collections, London, England)

According to Bourdieu, *field* is concerned with the social space in which interactions, transactions and events occur. In his perspective, an analysis of social space mean not only locating the object of investigation in its specific historical and local/national/international and relational context, but also interrogating the ways in which previous knowledge about the object under investigation had been generated, by whom, and whose interests were served by those knowledge-generation practices. (Thomson in: Grenfell, 2008, p. 67) Drawing on three types of analogy, the football field, the science fiction force-fields and the physics force-field, Thomson (idem, p. 68-74) delimitates to a certain degree Bourdieu's notion of field. In the first image, a football field is defined as a bounded site where a game is played. In order to play the game, players have set positions. The game has specific rules which novice players must learn, together with basic skills, as they begin to play. What players can do, and where they can go during the game depends on their field position. The actual physical condition of the field (whether it is wet, dry, well grassed or full of potholes), also has an effect on what players can do and thus how the game can be played. Fields are shaped differently according to the game that is played on them. They have their own rules, histories, star players, legends and lore. Although Thomson does not mention it, some rules and behaviours in every game are not explicit or formalized, but each player in time learns how to behave in order to continue playing the game.

In the second analogy, Thomson will refer to social agents that, occupying particular positions, understand how to behave in the field, and this understanding not only feels "natural" but can be explained using the truths, or *doxa*, that are common parlance within the field. That's what allows him to evoke the image of a science fiction space ship that is in deed a microcosm, inside which activities follow regular and ordered patterns and have some predictability. Hierarchically structured, there are some people who are dominant and who have decision-making power over the ways in which the little social world functions. Without this, the social world inside the space ship, would become anarchic and cease to function. The space ship in this analogy is a force field, designed to protect insiders from the outside environment. Each individual occupies more than one social field at a time, as there are multiple social fields such as the economic field, the education field, the field of the arts, bureaucratic and political fields, and so on.

In the physics domain, Thomson understands a force field as it is generally represented: as a set of vectors which illustrate the forces exerted by one object on another. Bourdieu proposed that cultural and economic capital operated as two hierarchized poles in a social field: "At one pole, the economically or temporally dominant and culturally dominated positions and at the other, the culturally dominant and economically dominated positions". Lipstadt (2005, p. 433) defines field as a system for analyzing the overlapping and competing elements that constitute society, or social space. She goes on considering that a field is a universe of social

relations constituted by the members of the field in accordance with their own *habitus*, logic, stakes, *capitals* and interests.

Understanding this dynamic as described by Bourdieu imply in some acquaintance with his notion of *capital*. Moore makes use of a relatively long citation to introduce his chapter on *capital*: (in: Grenfell, 2008: p. 101)

It is in fact impossible to account for the structure and functioning of the social world unless one reintroduces capital in all its forms and not solely in the one form recognized by economic theory. Economic theory has allowed to be foisted upon it a definition of the economy of practices which is the historical invention of capitalism; and by reducing the universe of exchanges to mercantile exchange, which is objectively and subjectively oriented toward the maximization of profit, i.e., (economically) self-interested, it has implicitly defined the other forms of exchange as non-economic, and therefore disinterested. In particular, it defines as disinterested those forms of exchange which ensure the transubstantiation whereby the most material types of capital - those which are economic in the restricted sense - can present themselves in the immaterial form of cultural capital or social capital and vice-versa.

An important aspect Moore highlights is the contrast between the economic capital explicit nature and the veiled nature of cultural capital. The former is openly a self-interested instrument of exchange. Merchantile exchange is not of intrinsic value, but it is always a means to an end (profit, interest, a wage, etc.). Bourdieu contends that this is also true for other forms of symbolic capital, but that they, in their distinctive ways, deny and suppress their instrumentalism by proclaiming themselves to be disinterested and of intrinsic worth. (Moore in: Grenfell, 2008, p. 103) Within this perspective, Moore considers the example of the arts field which seems useful to think about the architectural field as far as its relations to the arts field are considered. In arts, cultural capital is presented as reflecting the intrinsic value of art works in themselves and the capacity of certain gifted individuals to recognize and appreciate those essential qualities. (p. 104)

Being the longest section in this article, I have deliberately privileged these considerations about Bourdieu thinking tools, *habitus*, *field* and *capital*, as a way to strengthen the ties between the two stages of the argumentation presented here. Essentially, I believe that the relation between the idea of sketching as a skill acquired and sophisticated through time and effort, and the logic of narratives inside which it assumes its senses and meanings resides in what the architect recognizes as being true, possible and valid. This recognition does not happen in relation to a truth, possibility or validity that exists in the "outside" world, ready to be identified, but it is something that is generated and developed in the inner world of the architect. This inner world, nevertheless, is not something "pure", or "original", but it is prone

to be in some ways predictable and delimited when considering Bourdieu's "thinking tools". Lipstadt understanding, for instance, is that the ultimate author is not an individual creator, but the field itself. (2005, p. 434)

iii. conclusion

Although architectural sketches are more frequently approached in their aspect of tools in the design process, in the present analysis I have sought to reflect about sketches as tools of constructing the architect skill of developing and sophisticating concepts through the act of drawing on paper. In this essay I have argued that architectural sketches are not merely translations what is already delineated in the architect's mind, but it is an activity that actually generates new information. Being by definition "unfinished" and hastily made, they nevertheless have the power of interfering in a quite real way in the material world, as illustrated by the examples of Sydney Opera House and Brasilia's cathedral.

In spite of the fact that sketches are commonly consisted in brisk traces, I've situated this rapidly made drawings in a context of long periods of training and effort. My claim is that sketching briefly and consistently in architecture is an activity that one is able to perform as a result of a skill maturation, the skill of developing concepts through drawings. As a consequence it is assumed that this process has a transforming effect in the mind and the body, the head and the hand, as illustrated by Pallasmaa testimony.

In addition, taking Le Corbusier's statement that drawing is a means to become "passionately involved", to enter into a kind of intuitive communion with the object of the drawing, I've explored the matter of involvement. As Sennett sustains that the ability to concentrate for long periods, required in order to develop a skill, comes before the comprehension of a subject, it seemed relevant to consider what would constitute relevant aspects when considering the engagement someone reaches when pursuing a skill development, before comprehending or dominating a subject. In a way it seemed valid to consider that, in architecture, this happens to an apprentice when entering the profession, but it also happens throughout the whole architect's life, once each project is about developing something that doesn't exist yet.

The second session of the article was dedicated to situate the efforts and engagements of those who enter, or continue in the profession of architecture, regarding the activity of sketching. In this scenario sketching has been regarded as acts of citation. In my attempt to reflect about what engages and motivates someone to go further in the way of enhancing the skill of sketching, it seemed that, in the source of commitment and motivation, an ingredient of fantasy may be present. But not one completely detached from external social elements but, on the contrary, one actually generated in the social space, fabricated with the threads of narratives and internalized by forces that can be understood under Bourdieu's concepts of

habitus, *field* and *capital*. Within this scenario, one engages in developing the skill of sketching in architecture because, he/she to some degree identifies himself/herself with the professional *habitus*, sees himself/herself as belonging to that *field*, and pursues to acquire that particular *capital*. This identification may be perceived as something that is already happening, or something to be conquered in a relatively near future. This identification also may never be perceived as completely accomplished, something that may serve as a potent engine moving the person towards the acquisition of manners and capitals that inserts him/her more comfortably and securely in the field. In this dynamics, architectural sketching can no longer be interpreted as only a way to become "passionately involved" with the object drawn, but also as a way to become involved within the professional realm, in search for recognition and the prerogatives granted by this "force field".

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