Urban Protophenomenon

Introducing the notion of primordial phenomenon in urbanism

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Abstract. This paper aims to draw the necessary distinctions in order to contribute to identify, among all the objects that populate our world of perception, the urbanist’s own object of study. In systemic jargon, it aims to distinguish that elemental unity that ensures that a phenomenon is an urban one and none other. This, in order to help to distinguish in turn the urbanist’s own field of action. It calls into question the widespread belief that this object of study might be the already built city as current academic and professional tradition dictates and postulates instead the study of the urban protophenomenon—alternatively, of the archetypal citizen— as a genuinely urban route for the attainment of urban knowledge.

Keywords. urban phenomenon, architectural phenomenon, urban protophenomenon, architectural protophenomenon, phenomenology.

Introduction

One of the most ingrained assumptions in academic and professional architectural and urban circles since the fall of the classic treatise’s authority must surely be the belief that architectural and urban knowledge is to be found embedded in existent precedents; to use Space Syntax’s jargon, to be ‘retrieved’ from already built structures. This work seeks to bring this tacit belief into question by highlighting the basal distinction between natural and artificial orders. Concretely, it aims to make plain that neither architecture nor the urban universe were brought into being by means of nature’s own blind will. That there was a time in human history when there were no built precedents from which to retrieve any knowledge; a moment when the architectonic phenomenon became manifest for the first time. The acceptance of this fact poses the following momentous question: Where did the ‘protoarchitects’ and ‘protourbanists’ get their knowledge from in order to inform the first works of architecture and the first cities if there were no built precedents from which to retrieve any knowledge whatsoever? With built precedents ruled out—following a phenomenological approach of Goethean lineage—it will be argued that the proto-architects did not study nature either but rather, the ‘archetypal client,’ neologism coined by the author (Araneda, 2009) for the human nature in need of a dwelling according to its own laws. Accordingly, we shall argue that the proto-urbanists in turn did not study any city but rather the ‘archetypal citizen,’ neologism also coined by the author for man in need of other men i.e., for face-to-face communication. We shall methodically derive the later from a brief assessment of the former, postulate its study as the wellspring of urban knowledge and outline a generic empirical approach to urban
analysis. We argue that survival of architecture and urbanism as social systems - at stake in the age of interdisciplinarity - depends upon the drawing of these crucial distinctions.

**The study of the urban phenomenon as source of urban knowledge**

A fascinating and still little studied chapter in the history of architectural and urban theory is the one related to the fall of the treatise as source of urban knowledge, a tradition inaugurated with the re-discovery and publication of the Vitruvian texts around the 1400’s. Indeed, right up to the beginnings of the XIX century, the attainment of architectural and urban knowledge presupposed the study of the great treatises on architecture and urbanism in existence. However, the characteristic prescriptive tone in which they were normally written - that likens them more to biblical revelations than academic essays - has prevented them from enduring in time as valid academic and professional references.

Indeed, the adoption of the knowledge contained in the treatise has historically presupposed a leap of faith in us architects, a leap that architects and urbanists of the post phenomenology paradigm shift are not willing to take any longer. This historic moment was concisely captured by Bernd Evers (2006) whom, in an insightful introduction to an historical compendium of architectural history, postulates the fall of the Vitruvian triadic canon around 1750, as the first consequence of this reaction against the historic authority of the treatise. While ceasing to be the exclusive source of architectural and urban knowledge, the study of the built precedent began to gain ground, to a point where today we hardly conceive any other possible origin for architectural and urban knowledge other than the study of already built architecture and cities.

This widespread, tacit belief regarding the origin of architectural knowledge has been captured with admirable honesty in the following lines: “It is senseless to ask ‘what is architecture,’ as if it were born with us or, to be more precise, with our question. Architecture is already present in the built works, ruined or in one piece, in projects, sketches and writings. We should not attempt to invent it but to reinterpret it and rebuild it. There is more sense, then, in asking for what architecture has been.” (Pérez et al., 2002).

As for the origin of urban knowledge, Bill Hillier and the Space Syntax team’s work case is a highly representative case in point: “… space syntax starts with the object [city] and examines it for evidence of order resulting from human behavior.” (Hillier, 2005).

This procedure, however, surely entails an even greater leap of faith on our part, for it presupposes that the architect and the urbanist responsible for the works and spaces we study were in possession of architectural and urban knowledge when they conceived and built their work. And since the fall of the treatise’s authority (precipitated by the tentative triumph of Kantian aesthetics over the Goethean one) there is no universally acknowledged theoretical frame that validates the architect and the urbanist’s actions, there is no yardstick that attests for the validity of the built work as properly architectural or urban.

Now, the failure of the Cartesian-Kantian outlook and ultimately, of physics, to explain the origin of life out of the study of matter, together with the parallel advent of the new sciences of systems, of cybernetics and communication -all of them of phenomenological extraction- put an end to the so far unchallenged reign of the Kantian cosmogony for they reintroduced the observer in the process of knowing (Varela, 1993, Seamon and Zajonc, 1998). With this, the phenomenological zeitgeist -until then a philosophical extravagance- was finally acknowledged from within the scientific establishment, something that has helped to redeem art and architecture as an agent of non-verbal communication.

It was imbued with this zeitgeist that the Dutch architect Hans van der Laan carried out what has come to be increasingly acknowledged as one of the most important discoveries (according to him, strictly speaking, a re-discovery) ever made in architecture,
namely, the plastic number. (Laan, 1967). Referring to this number, Borchers wrote: ‘Such a number can neither be arithmetical nor geometrical; it must come from a different order, symbolizing a different world.’ (Borchers, 1967) Yet, symptomatically enough, their quest—both reverential and successful—for the foundations of the discipline, did not lead them to the study of built precedents. For them, the built work was always a means of verification and rectification of discoveries that, as a general rule, are the result of a previous study; the study of a universe other than built architecture.

The question here is: To which world is Borchers referring to above? Where did he and van der Laan explore in order to gain access to what they saw as the wellspring of architectural knowledge? In what follows we shall argue that neither the study of built precedents nor the study of nature guided their quest for architectural knowledge but, rather more simply, the study of a second, more refined and highly differentiated kind of nature: the human nature. To be sure: the human nature ‘in need of a dwelling’ in accordance with its own inner laws. This path will lead us unbiddenly to urban fields.

**Shifting from the study of the urban phenomenon to the study of the urban protophenomenon**

Among all of van der Laan’s achievements probably the most striking one is the fact that—by rescuing size concerns from the periphery of academic and professional debate—he effectively rebuilt and updated the ancient triadic tradition: the one that dictates that the solidity (firmitas) and functionality (utilitas) do not make for a wholesome answer to the demands posed by our human nature. If this is to be achieved, then our work must also reckon with the problem of architectonic size, traditionally known as proportion (venustas). For, according to him, just as the lack of architectonic space leave us physically homeless and the lack of an architectonic form ‘aesthetically homeless,’ so does the lack of architectonic size leave us ‘intellectually homeless.’ (Laan, 1983, p., 175).

This said, we would argue that he left his work disposed of urban potential for he omitted the fact that size has not one but a twofold implication upon our experience. It not only affects our perception of a building but also our perception of other people in and out of buildings. The first path leads to the study of proportions. The second, however, leads to the study of a field that was tentatively called Proxemics (Hall, 1969) but that we will here call by its ancestral name: urbanism, the art not of building buildings but of building communities and societies ‘by means of’ buildings.

According to this, whereas the architectural protophenomenon consists of a study of the threefold demand placed by the archetypal client in need of a dwelling, the urban protophenomenon consists of a study of this very same human nature, but this time, in need of other such human natures. In other words, the urban protophenomenon has nothing to do with the study of men in need of housing as it is normally assumed but rather, with the study of people in need of other people. In line with the above declared *zeitgeist*, we shall concentrate on the Social Communicative Approach (as supposed to the Emotional Expression Approach), one that focuses on the study of the perception of other people’s faces or countenances independently of the emotions transmitted by it (Chovil, 1997).

**The Study of the Urban Protophenomenon as Source of Urban Knowledge.**

Understood in this way, urbanism has been sporadically studied by a handful of people. We shall here review a few of them. First, the little known work of the German architect Hermann Maertens (1884), whose pioneer studies led him to a fairly thorough approach to the study of what he defined as the human scale. He departed from a physiological fact: that one cannot discern any object at a distance more than 3,450 times its size. He related this data to the perception of the nasal bone as the chief element for
face perception. Elaborating on this data, he arrived at a maximum distance for human scale of around 21 meters, one that he postulated as a yardstick in order to measure out, among other things, the maximum width of streets (See also Blumenfeld and Speiregen, 1972).

A more systematic study can be found in the work of American anthropologist Edward T. Hall, founder father of Proxemics (Hall, 1969, 1973, 1976). Its chief contribution to socio/urban knowledge was to relive urban and sociological studies once and for all from the atavistic anthropometric view that sees human experience as ending with the skin. Instead, it provided with a complex image of man as a living, pulsating being surrounded by a set of communicative spheres that form a kind of atmosphere around us. He got to methodically define a set of 4 distances, each with a close and a far phase, the last one ending at around 8 meters. However, he never set the limit for the deactivation of face to face communication potential. Or, seen the other way round, he never got to set the limit for the activation of the face-to-face communication potential.

Building on Hall’s research, the Danish architect Jan Gehl (2001) went further by taking into account the shift from verbal to non verbal communication, particularly, to sight perception. In this way, Gehl expands the possibilities of face to face communication by placing a new communicative sphere as far as 30 meters, a distance where, according to him, people can still be perceived as individuals. Finally, we shall mention the work of Chilean architect and urbanist Jaime Garretón, author of an urban treatise titled ‘A cybernetic theory of the city and its system’ (Garretón, 1975). His work departs with the mathematical setting of that very distance that had eluded all others in the field, namely, the limit for face-to-face communication. In order to do so, he focused on the study of the countenance key features: the mouth, the nose and the eyes.

He then defined the mean distance between them all and brought them into plastic relation by framing them within a rectangle of 5 by 7 units, this on the one hand. On the other, he defined a set of constants measures within the eye itself. With this equation, he was able to find the distance at which the key features of the face cannot be perceived as discreet signals anymore and therefore, where they cannot be brought into relation with each other. He placed this limit at around 48 meters and called this meta-communicative sphere the ‘direct contact neighborhood.’ With this he finally drew the distinction that allows the contemplation of the urban protophenomenon as an autopoietic unity. We can now begin to visualize this pulsating complex expanding and contracting as the communicative spheres get activated or deactivated depending on the presence or absence of others around us. This in turn provides us with a new urban yardstick, one that not only allows measuring up but, more important still, measuring out of urban space. For immediate purposes, we shall focus on the former, outlining a generic approach to the analysis of the unfathomable communicative dimension of the grid.

Figure 1
Diagrammatic representation of the archetypal citizen. (Araneda 2009)
Practical Aspects

With this data at hand we can move in at least two parallel fronts: a diagrammatic one and an experiential one. First, we shall begin with the abstract/diagrammatic approach to test the communicative potential of the grid, one that for the sake of comparison, in recognition of Hillier’s undisputable achievements, we shall tentatively call ‘communicative syntax.’ Second, we shall undertake a first-hand approach to actual experience of urban space. The gathered information will then be contrasted and the conclusions elaborated. The chosen case will be the foundational layout of the city of Concepcion in Chile, a bearer of the classic Hispano-American checkerboard model.

Communicative Syntax

We proceed to superimpose the direct contact neighborhood yardstick upon a simplified map of the chosen area. The criteria regarding this imposition derive from van der Laan’s observation that streets must be seen as ‘elongated squares or plazas.’ (Laan, 1983). For if we are to comply with the demands of the archetypal citizen i.e. to preserve and empower face-to-face communication, urban space must pay observance to the maximum distance for it to remain active across the grid. Accordingly, a yardstick shall be placed at each intersection of streets. We can then see where a determined yardstick comes under the influence of another and proceed to draw a plan showing the state of the communicative potential of the grid. This plan might well be called ‘communicative integration map.’

It becomes clear that the communicative potential of the grid remains active as long as the blocks remain within the maximum size defined by the obtained yardstick. In the chosen case, this happens where the original layout has been transformed by the systematic fragmentation brought about by the new pedestrian galleries and streets. Beyond this, the size of the block would make it impossible for two persons standing at each side of this ‘elongated
square’ to see each other. The communicative potential of the grid becomes hindered. As Garretón and the author have stated elsewhere, the corollary follows from this that the classic Hispano-American grid has historically contravened this urban law and therefore, that in the light of the age of communication and information, is in need of urgent revision.

**Urban Journeys (Outline for Kinetic Density Calculus)**

On another front, we can undertake what we call urban journeys. In this case, we made journeys in straight line across the whole chosen area through an even number of streets in each direction of the grid, five longitudinal journeys and six transversal ones. They were done in different days a week but at the same time of the day. With camera in hand, we took snapshots at regular distance intervals, all at observer height and with a 35mm lens in order to stay as close to normal visual field experience as possible. These photos are then placed together in a films strip format. Then, we can proceed to determine how much information in the shape of persons and how much in the shape of buildings. This Garretón called ‘kinetic density’, the amount of people present in our visual field at any given time in urban space. In order to do so, we transform people into colored shapes. The same could also be done with buildings by inverting colored surfaces.

With this visual information we are already in a position to do interesting statistical calculus regarding the information present during our experience.
Figure 7
Filmstrip of transversal journeys

Figure 8
Kinetic density in the transversal journeys
in the city. At a visual stage showed that kinetic density is higher where the urban space is made up by smaller blocks and close to nil in the periphery made up of blocks that retain their original size. Unlike current trends in urban analysis led by Space Syntax and Space Syntax like initiatives- that focus on the already existent structure- our approach departs from experience in order to be contrasted at a later stage with diagrammatic information. The comparative analysis shows, at least in this case, a direct correspondence between the communicative syntax analysis and the kinetic density calculus obtained by means of urban journeys. It goes without saying; this exercise must be seen as a first indication of the direction urban studies can take when informed by the study of the urban protophenomenon.

**Conclusion**

The shift of focus from the study of the urban phenomenon (space and movement) to that of the urban protophenonon or of the archetypal citizen opens a wealth of research potential both at a design and at an analytical level. Together, they make for a fresh approach to urban studies, one that places experience before abstract, diagrammatic analysis. Or rather, that derives diagrams from experience. The experiential evidence here gathered and approach outlined suggests that urban studies could benefit much from the use of cinematographic technology to the study of people in movement both, from observer height as well as from bird eye view. At the very least, this would help to record patterns of appearance and disappearance of people and more specifically, of faces in our visual field. We believe this approach would bring us closer to a more refined study of the unfathomable realities of the archetypal citizen. For the time being, we believe this raw approach to urban analysis already shows a way to relieve urban studies from their currently archetypal nature by providing them with a new vitality from which both, professionals and academics can profit. Finally, it is our hope that these rudiments of analytical tools can help to realize to what extent the vital, living, law giver aspect of the city remains understudied and therefore, that in terms of evidence based urban analysis, as Hillier rightly demands, much remains to be written.

**References**

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