Living inside the Language: Architecture, Education and Society

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Abstract

Our research group GIRAS-TEC has been working during the last forty years on the relationships between architecture, education and society (www.arquitectonics.com) that implies in a way or other the possibility of a "linguistic" dimension of architectural and urban design as a life-span place-making activity (Muntaña, Towards and Epistemological Analysis of Architectural Design as a Place-Making Activity, 1980; Holquist, 2015; Seamon, 2008). In spite of the work done by Ch. Alexander (1977), B. Hillier (1996), E. Hutchins (1995), P Gärdenfors (2004), etc. looking for some kind of geometric inter-subjective spatial and social order in architectural and urban design. These orders have had little impact on practice, in spite of their scientific and important theoretical findings.

We will explain the possibility that a developmental study of the children's conceptions of cities to live in, with space syntax descriptions and the use of other digital cognitive tools (Saura, Muntaña, & Méndez, 2014) can demonstrate that the fundamental hypothesis by E. Husserl about the origin of geometry at the intersection of the ontogenetic lifespan development (education from childhood to adult stage) and the phylogenetic social development (history and culture) was a useful insight (Husserl, 1962; Langer, Rivera, Schlesinger, & Wakeley, 2003). Finally, in this way, the last studies by Jean Piaget and followers recently translated into English (Piaget, Henriques, & Ascher, 2013) will open the door to new "linguistic" cognitive spatial and social interdisciplinary design methodologies, recently uncovered and far to be explicitly known neither by designers nor by other disciplines (Zimmermann & Hofkirchner, 2009).

Chapter I. Living Inside the Language: Architecture, Education and Society

The last text written by Mikhail Bakhtin in 1974, few months before he died in 1975 (see Diagram I) synthetizes the combination between ecology, sociology and cognitive sciences in relation to architecture and planning at the end of the XXth century AC. If we compare this text with the arguments in Diagram II, written by Bakhtin fifty years before dealing with the ideas by Goethe describing the travel in Italian cities, we will have a first intuition about the difficulties of living inside a language, or the possibilities of a linguistic architecture.
The efforts by Ch. Alexander and other architects trying to find a linguistic code of architecture and planning are confronted with the specific qualities of living inside a language and simultaneously intend to find the code of it. Aware of these qualities E. Husserl defined the origin of the geometric knowledge at the crossing point between ontology and phylogeny, in a human society already articulated inter-subjectively thanks to language.

In this sense, the work we have done for years about the social construction of models of places to live in by groups of six children, three boys and three girls, is a good example of this power of architectural forms to be the crossing point between ontogeny and phylogeny. It is the creative power of the chronotopic dimensions of human culture, which is able of a space and time organization of works like the shown in Diagram III.

If it is true that all this development has in the natural forces a needed reference -Bakhtin itself indicates that the chronotope was inspired by a lecture about embryogenesis-it is also true that we should go beyond this reference and go towards a psychosocial linguistic model. The works by Seamon (2008) are on the wright way, but a lot of work is still needed.

**Chapter II. On the research of an architectural code of communication**

Several years ago, in 1977, professor Josep Muntañola published, in French, an article in the mythical journal *Communications* with Roland Barthes, Edgar Morin, etc. in leading committee, and Pierre Boudon as the editor of the issue devoted to the Semiotics of the Space.

Diagrams IV and V are a copy of the original figures in French in the journal, and it is easy to see that the kernel of the research was the fitness between assimilation and accommodation in the subject and environment interactions, using Jean Piaget concepts, and also the fitness, again, between functional viewpoints and formal viewpoints about architecture and planning, called causal and axiological in that article. The centre in diagram IV, the number 5, the crossing point of these two interactions, was the empty place of an architectural design interactive future code. As we were arguing before in Chapter I, almost fifty years later, the semiotics of space is still today a difficult scientific field to go through.

However, there are new findings with E. Hutchins (2006) and P. Gardenfors (2004) in the first place. The ideas by E, Husserl are taking form in innovative ways, since geometry is, now, a sharing process of distributed knowledge. So, it is both, knowledge and communication simultaneously, in a way that seems very close to Ch. Alexander patterns or B. Hillier space syntax, but it is not the same thing, since is more abstract that a pattern and more specific than an space syntax web (see Diagram VI).

On the other side, the geometry in Diagram VI, as in all the work by Peter Gardenfors, is an internal chronotopic organization of space and time, inside the mind and inside culture, very well defined in the summary of a recent lecture by Alan Penn, dean in the Bartlet School of the UCLondon:
"Architecture: the exosomatic in cognition, culture and design education. This paper reviews what has been learned through 'space syntax' research about the relationship between the morphology of the environment, human behaviour and social use. From this background it reflects on the role of computation in research and design, and the implication of this for the education of architects. It argues, rather than thinking that the mind must be extended beyond the body, that the built environment takes on structure through design that in turn is learnable and learned by human minds. It proposes that architecture may offer an important mechanism through which social forms and cultures 'get inside people's heads', and so transmit from generation to generation" (Penn, 2015).

Are we near of this famous code or more far than ever? We know better by now our scientific limitations and the ways to overcome them. We need to avoid again empirical reductionisms and naturalistic bio-sociological simplifications. Children show us the way, physical forms are, for them, an agreement between individual and collective developments. They are “laws”, and these laws equilibrate assimilation and accommodation, on the one side, and causality and axiomatic categories, on the other side, as was forecast before. However, and as design by computer indicates today, we are also in a long way to go, and we do not know if there will be a code waiting us at the end, or simply, architecture and urban planning are building codes by themselves.

What is sure is that the parametric copy of nature is not a good answer (diagram VII). And perhaps Plato in Timaeus was right:

“And there is a third nature which is space and is eternal, and admits not of destruction, and provides home for all created things, and is apprehended when all sense is absent by a kind of spurious reason and is hardly real (...) but true and exact reason, vindicating the nature of true being, maintains that while two things (that is the image and space) are different they cannot exist one of them in the other and so be one and also two at the same time …"

“Then my verdict is that being, space and generation, these three, exist in their three ways before the heaven..."
Bibliography


“We have been speaking so far only of the major chronotopes, those that are most fundamental and wide-ranging. But each such chronotope can include within it an unlimited number of minor chronotopes; in fact, as we have already said, any motif may have a special chronotope of its own.

Within the limits of a single work and within the total literary output of a single author we may notice a number of different chronotopes and complex interactions among them, specific to the given work or author; it is common moreover for one of these chronotopes to envelope or dominate the others (such, primarily, are those we have analysed in this essay). Chronotopes are mutually inclusive, they co-exist, they may be interwoven with, replace or oppose one another, contradict one another or find themselves in ever more complex interrelationships. The relationships themselves that exist among chronotopes cannot enter into any of the relationships contained within chronotopes. The general characteristic of these interactions is that they are dialogical (in the broadest use of the word). But this dialogue cannot enter into the world represented in the work, nor into any of the chronotopes represented in it; it is outside the world represented, although not outside the work as a whole. It (this dialogue) enters the world of the author, of the performer, and the world of the listeners and readers. And all these worlds are chronotopic as well.” (Bakhtin, The Dialogical Imagination by M.M. Bakhtin, 1981, p. 252)

As we have already said, there is a sharp and categorical boundary line between the actual world as source of representation and must never confuse – as has been done up to now and as is still often done – the represented world with the world outside the text (naïve realism); nor must we confuse the author-creator of a work with the author as a human being (naïve biographism); nor confuse the listener or reader of multiple and varied periods”. (Bakhtin, The Dialogical Imagination by M.M. Bakhtin, 1981, p. 253)
Diagram II. Summary of Baktin's interpretation of Goethe's Ideas [about (Bakhtin, 1986)].

a) We have an ESSENTIAL and LIVING vestige of the past on the present (not unanimated but ANIMATED). There is a NECESSARY CONNECTION between the past and the living present, to understand the NECESSARY PLACE of the past in the UNBROKEN LINE OF HISTORICAL DEVELOPMENT. The strange chunk of past was for Goethe a GHOST. (Example of the rock and the mountain. Everything has its STABLE and NECESSARY place in time)

b) The past itself must be CREATIVE (Ricoeur) It must have EFFECT on the present Such a creative effect of the past determine the present, produces in conjunction with the present, a particular direction to the future, to a certain degree predetermines the future. One achieves A FULLNESS OF TIME and it is a graphic, visible completeness. (Trees on Einbeck)

c) Historical vision relies upon a deep, painstaking and concrete perception of LOCALITY (localitat) The creative past must be revealed as necessary and productive under the conditions of a given locality, as a creative humanization of this locality, which transforms a portion of terrestrial space into a place of historical life for people, into a corner of historical world.

d) First Goethe had a romantic sense of the past and present together, however the realistic component WAS THERE FROM THE VERY BEGUINING, then the work of the eye is to contemplate the need for performance and creativity in a PARTICULAR PLACE in a PARTICULAR TIME.
This is, in a correctly understood, objectively viewed space (unadultered by feelings and fantasy) one discovers the visible internal necessity of history (that is of a particular historical process or event) (Design, Muntañola).

TERRITORIAL SPACE AND HUMAN HISTORY ARE INSEPARABLE ONE ANOTHER IN GOETHE'S VISIONS AND THAT IS WHAT MAKES HISTORICAL TIME IN HIS CREATIVE WORK SO DENSE AND MATERIALIZED, AND SPACE SO HUMANLY INTERPRETER AND INTENSIVE

EVERYTHING IN THIS WORLD IS A TIME-SPACE CHRONOTOPE (Bakhtin)

The locality become an irreplaceable part of the geographically and historically determined world AND THAT COMPLETELY REAL AND ESSENTIALLY VISIBLE WORLD OF HUMAN HISTORY AND THE EVENT, BECOME AN ESSENTIAL AND NO TRANSFERABLE MOMENT IN TIME OF THIS PARTICULAR HUMAN HISTORY THAT OCCURRED IN THIS, AND ONLY IN THIS, GEOGRAPHICALLY HUMAN WORLD. The world and history did not become poorer or smaller as a result of this process of mutual concretization and interpenetration, ON THE CONTRARY THEY WERE CONDENSED COMPACTED AND FILLED WITH THE CREATIVE POSSIBILITE OF SUBSEQUENT REAL EMERGENCE AND DEVELOPMENT.GOETHE’S WORLD IS A GERMINATIVE SEED, UTTERLY REAL, VISIBLY AVAILABLE, AND AT THE SAME TIME FILLED WITH AN EQUALLY REAL FUTURE THAT IS GROWING OUT OF IT

(Introductive note by Emerson and Holquist: this kind of concrete space that obsesses Bakhtin marks the strong difference with Heidegger positions where space has a lower status than time, in the chronotope by Bakhtin space and time have equally important status) (that explains also the difference with the Genius Loci by Norberg-Shulz, also attached to the Heidegger position, on the contrary the close relation with the views of Ricoeur are clear, since he is very critical with Heidegger just in relation with the intersubjective spatial meanings of human existence, Muntañola)
Diagram III. Models of “places to live in” built by children.

a) Monological Cities

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Views and voices are independent
Configuration subjects-objects doesn’t exist
The physical space and time, and social space at a time, are only related at individual level.
No correlation between subject and object relations. The rules of objects and subjects are not interdependent
Objects and subjects are context-free

b) Dialogical Cities

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Views and voices related
Configuration exists between subjects / objects
Physical-social space chronotopically related with time
The rules of objects and subjects are interdependent
Subject and object form a context

c) Syntax Space of the “place to live in”.

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Diagram IV. Epistemological classification of Semiotics (Muntañola, 1977, p. 20).

Diagram V. Links between psychogenetic, sociogenetic and topogenetic dimensions of architecture (Muntañola, 1977, p. 16).

Diagram VII. Computer Design as a copy of natural forms.