Architectural Design Education in Europe: Mind, Land and Society in a Global World

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Abstract

This text is an answer to the kind (and difficult) task I was asked to carry out by Professor Constantin Spiridonidis, of assessment and reflections on the book: *Monitoring Architectural Education in Europe* edited by him and recently published by the ENHSA.

It is a long answer, but this subject matter, the architectural design education, requires great attention today. So I have organized it in three chapters and four annexes with articles that I have presented recently at international congresses and in reviews of education. The reason to attach these articles is the need for a theoretical basis of my assessment that I cannot include directly here, because it would convert my contribution into a hard text to read. The three chapters are: first, a very general introduction; second, the comments on the book; and third, the concluding remarks for the future of architectural design education. My main aim is to define the core of architectural education, that is, the specificity of our schools of architecture that we should defend, because it keeps architecture running alive and strong.

It is clear that our built environment has not got the qualities that we think it should have. Education is an excellent way of improving our expectations for changes in the right direction. So this is the aim of this long answer to Professor Spiridonidis's petition. And I hope it will be useful for our schools and beyond.

1. Introduction: The State of the Art in Architectural Design Education

It is a pity that the architectural design education realm does not have a permanent international review or a permanent research box. Therefore, the role of the EAAE and the ENHSA international associations has been extremely important in the last years, aiming to overcome the weak conditions of the architectural basic research studies in general, and of the research on architectural design education, in particular. (See annex 1).

In my own archives I have found an old paper by the professor Horst Rittel after his Ulm experience: "Some Principles for the Design of an Educational System for Design" (Berkeley 1966), and the four unique issues of the review *Architectural Education* ceasing to appear in 1983. The discussions on the relations between practice and theory, or about the architect as generalist or specialist, were already analyzed at that time, and it seems as if nothing has happened during the last twenty five years ... The relevant work by N. Teymur, H. Webster, and others should of course be taken into consideration, but I think that the profession, as such, has been very sceptical about the important role of social sciences, philosophical theories and pedagogical educational approaches to architecture. Architecture has not been removed from all these cultural fields during these thirty years, on the contrary, as I point out in the articles in the annex, it has been the architects themselves that have removed architecture from social sciences and theoretical philosophical advances as, for example, the works by the late French philosopher Paul Ricœur, or the seminal books on space and time by the Russian thinker Mikhail Bakhtin.

In the articles I reproduce here in the annexes, I try to explain the reasons for this rather dark past and for the origin of this divorce between social sciences and architecture, but I would like to look to the future through the eyes of our children, and thanks to the excellent works we have today.

We are now at the gate of a new era. On the one hand, urbanization is taken more and more as a sign of des-urbanization, and on the other hand, architecture is taken more and more as a metaphor for the relations between structure and functionality in cognitive sciences, nano-technology, archaeology, biogenetics, etc. Architects are at the core of all these transformations, but we are afraid of the high responsibilities it will give if we really participate in all these cultural processes.

In effect, architecture is, as it has always been, at the crossroads between arts, sciences and politics, but, simultaneously, and this is today very significant, it is at the intersection of the psychogenetic space and time development and of the sociogenetic, historical, space and time processes,

that is, at the crossing point between mental space and time and social space and time.

For this reason Plato and Aristotle insist once and again on the idea that architecture and education should go together. Plato indicated how our cities are books where our children should read the laws of social interaction, and Aristotle pointed out the similar status between educators, legislators and architects, because all of them had to forecast the future.

So, architectural design education is today, both, at the top and at the bottom of our lives, as modern high scientific men. I will now go directly to the comments on the book, and at the end of the text I will return to the definition of our responsibilities as architects and educators in relation to our poor planet, day by day more urbanized...

2. **Comments on the Book:** Monitoring Architectural Design Education

Initiations

The ten courses classified in the book as Initiations belong to eight different countries. The average number of students per professor is 15 students, and the hours a week range from 4 to 20, although it is very hard to compare curricula among countries. (Two or three professors per course)

The course in Trondheim is a good reference; it has 23 students per professor, 12 hours a week and with a total of 168 hours, and it includes:

- The facilitation of project work (first in a team and finally each student alone).
- Workshops: body and space, analytical free-hand drawing, graphic design, geometry, sketch models, 1:1 scale models, how to structure visual information.

It points out: a social climate of learning, learning by doing, showing your work.

There are no big surprises here: Basic Design Courses aim to introduce students to architectural life by linking art, science and ethics, or if you want: poetics, knowledge and ethics. Trondheim is referred to because it clarifies the complexity of the task both physically and socially, either at a practical level or at a theoretical level.

It is significant that nobody bases the course on the computer, and that everybody points out the creative paradigm by crossing the individual and social axis with the representative and existential axis. At that crossing point the architectural imagination arises.

Proposal: Can we think about a European network of Basic Design Courses on Architecture?

Articulations

The second level of intermediate courses, gathers fourteen courses from Belgium, the United Kingdom, Cyprus, Serbia-Montenegro, Ireland, Turkey, the Check Republic, Germany and Italy. Students per professor ranged from 23 to 3. Hours a week were 18 in Belgrade, 20 in the UK or 20 in Prague, but with very different curriculum structure.

This is the most difficult stage of assessment. The articulations between design, building conditions, social meaning and social use are extremely diverse according to the differentiation among countries, teaching structures and social conditions of each "design studio".

I do not think we should go to a "homogeneous" model of teaching, although it is clear that these intermediate design studios need a lot of hours a week to be effective. Housing topics are basic at this stage too; however approaches to similar housing subjects differ a lot among schools.

The design studios in Belgrade, Edinburgh and Prague, are, to my opinion, powerful good pedagogical models of teaching. Nevertheless, it is easy to detect, in general, in most of the design courses, difficulties in the right articulation between the three basic dimensions of architecture: that is, design, building conditions and social dwelling. If poetics takes command, as it has in the three year design studio in Belgrade, aesthetics can be at a higher level of the other two architectural dimensions, but if building conditions and technologies take command, scientific reduc-

tionism can be the result, and a lot of possible design alternatives are lost forever. Finally, good social experiences and ethno-methodological analyses enriched design works, but they can develop poor poetic projects or weak scientific responses. They are needed but they are not sufficient.

So, progress from the basic design courses towards the more advanced design courses is the main concern at this point. Then: can we state that either way, through poetics, epistemology or social awareness, is a good way to go, as long as it arrives to a progressive outstanding articulation between the three basic dimensions of architecture we just defined above ?...

It is not easy to answer this question now, however we can answer that the architectural articulation only exists at the intersection of art, science and politics, on the one hand, and at the crossing point between reality and virtuality, on the other hand. Also we can say that this same architectural articulation configures the overall worldwide cultural specificity of the interactions between the object and its context. Finally, it is difficult to know if a vertical link between design studios with the same professors is better than a curriculum of horizontal courses with different professors, but in both cases the courses have the same objective, which is the progressive power of the architectural imagination between design, building conditions and social life.

In conclusion, the building conditions of the physical environment, the social conditions of the historical environment, and the power of the design as a valid architectural articulation between geography and history must work together in effective intermediate design courses. Moreover, it seems that the computer is not at this point a problem; the problem is more related to the difficult conditions of a "knowledge-in-progress" in such a condition.

Proposal: A European network of intermediate design studios of "knowledge-in-progress", with international evaluative workshops of confrontation of diverse design studios with different philosophical or theoretical perspectives.

Advanced Courses

Then we arrive to the most advanced courses, fourteen, from Holland, France, Poland, Greece, Belgium, Italy, Hungary, Finland, Serbia-Montenegro, the United Kingdom, Sweden and Norway. The main objective is to prepare the final project before the end of the curriculum. They range from advanced design studios till more theoretical design experiences, or more specific technological courses. Significantly, sometimes they are closer to the basic design courses than to the synthetic big intermediate design studios. They seem to go backwards.

Some of these advanced courses contain a valuable pedagogical work, as the course by the professor Helena Webster from Oxford. It is also significant to point out that these courses have less hours a week than the intermediate courses, and less students per professor.

This final stage of architectural design education shows a very important set of specific characteristics. First, some "regressions" to older stages in the personal development of students, by looking to more "abstract syntheses" than in the intermediate courses. Second some "real" case studies with links to the political community. Third, some technological design studios with special emphasis on computer technical advise for representation, etc.

We summarize, then, the two first stages, basic design studios and intermediate design courses, into advanced design studios. Two main aspects take the command at this point: the kind of representation of the design, and the object to context dialogical interactions.

These two aspects are two faces of the same coin, as I will try to explain now.

In fact, the way architecture is represented in the advanced design studio (more abstract, less abstract, more realistic sociologically, or less realistic, the degree of technological definition in the plans, the kind of models, collages, drawings, etc.) that is, the real versus the virtual axis defined in the basic design courses, is closely related with the way the built and used object will be related to its context. If we reject this fact, we are saying that social interaction is designed (represented) in one way, built in another way and used in still another different way. That is, we are conceiv-

ing three diverse architectural worlds independent one from the other. And we are building a schizophrenic environment in our schools.

As Paul Ricœur has pointed out[1]: "We need to take distance from the manipulated reality in order to enter the poetic world of possible diverse worlds". However this poetic power of design has to answer the ethical and scientific urgent questions of our environment instead of running from these questions. There can be cases of final projects that eliminate the questions to the point where the limit between reality and virtuality is without architectural significance. Differences between basic design and final design are eliminated and the student behaves as if the theories about the wise primitive man were true: the students are naturally gifted, they need no education. Of course, that would be the wrong conclusion according to the works by Paul Ricœur and Mikhail Bakhtin.

Proposal: To establish an international prize for three final projects a year between all the European schools, with a publication of the projects with the methodological processes and theoretical foundations, and the political, poetical and scientific considerations. The jury should change each year with a member selected by the ENHSA, another by the EAAE and another by the students.

3. Concluding Remarks

These concluding remarks follow the comments stated in the introduction above, and the four theoretical articles in the annexes.

A first conclusion deals with the differentiation between architectural design education and architectural urban design education. The late Josep Lluis Sert emphasized to me forty years ago in a letter, which I have reproduced in the article of annex 1, that this has been a negative process for architectural education.[2] However this is not the subject matter of our assessment today, so I will not analyse this point any further.

A second set of considerations deals with the core of "architectural knowledge", as a bridge between the mental space and time development, the historical and social space and time and the physical (cosmic) space and time transformations. In chapter two, I have made some comments on the way architects are educated at each of the three stages of the school curricula. It is not difficult to see that these three imaginative spatial and temporal worlds needed by the architect should be articulated either by the design, by the built object, or by the social use of this same object (or city). So the best school is the one that is able to teach this specific knowledge that we define as "architectural knowledge"[3]. As I have already noted in several publications[4], the Russian thinker Mikhail Bakhtin defined architectonics as the knowledge needed to understand the point of connection between aesthetics, science (cognition) and ethics (you and me). The key concept in order to analyze this specific knowledge is the "chronotope", that is, the space and time organization of a cultural object (literary text, painting, building, etc.)[5].This chronotopic organization of the object links the three imaginative worlds already quoted before: that is, the mental, the socio-historical and the cosmic space and time. It also links the virtual and the real dimension of our lives, as any imagination does. In conclusion we can say that this chronotopic organization is the architectural imagination between mind, land and society that we are looking for in our schools.

The third set of concluding remarks deals with the conditions we should follow in order to teach this specific architectural knowledge. We can talk about some kind of dynamic equilibrium between poetics, ethics and cognition. In other words, the architect is a poet, a thinker and a politician, all in one. The dialogical consistency between these different players involved in the "acting" of an architect, is not a random collage, but a solid chronotopic organization, that should be: an art work, a legitimate social product and a wise technological instrument.

In the way children arrive to this specific architectural knowledge[6], I have found excellent clues about how this dialogical consistency works. Just think about the psychogenesis of the "empty " architectural objects during the three first years of mental development, it is not only a matter

of cognitive development, the ethical and social component and the aesthetic and poetic dimension of mental development are also present in this outstanding human event: the mental genesis of empty objects.

The fourth and last set of concluding remarks is about machines in architecture, and not only in design[7]. This is an enormous field of research and goes out of our scope here, but I propose it for future meetings. One main consideration here: the way computers represent our natural and historical environments totally controls the way architects can design on them, and it is a perfect tool for speculation and social manipulation, since people believe that the representation is more real than the reality in itself [8]. Paradoxically, the same machines that destroy could be the machines able to renew and to enrich our environments.

Final Proposals: To develop a field of research on: Mind, Land and Society, where all these concluding remarks can be tested, developed and implemented, in such a way that our social development, our mental development and our "cosmic", bio-genetic environment, could work together, reinforce each other, for a beautiful, safe and wise architectural environment to exist.

New Subjects: Architecture versus urban design education, the machines in architectural design education, profession and university relationships in the architectural realm, architecture: future-past.

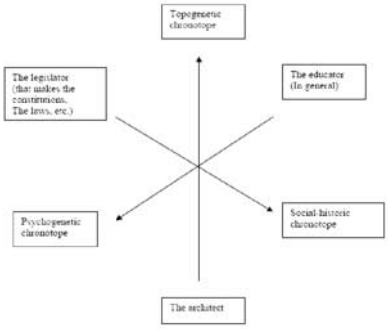

Diagram I: The three professions that need an architectural wisdom because they have to foresee the future in some way or the other (according to Aristotle).

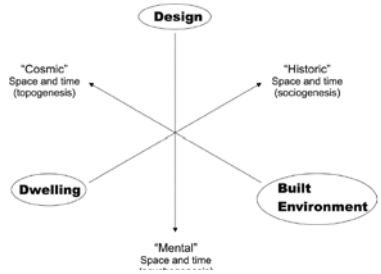

Diagram II: The three chronotopic basic dimensions of architecture

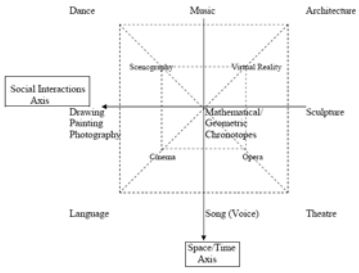

Diagram III: Chronotopic Structure of Intersubjective and Intertextual Communication

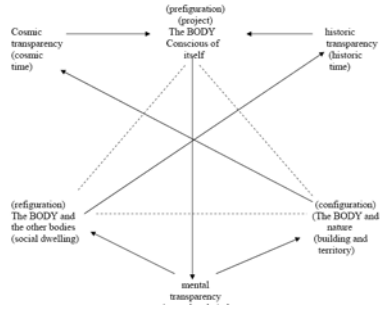

Diagram IV: The three architectural transparencies

Notes

1. From the lectures in Paris in 1976 on *Image and Imagination*. These lectures are not published in French but only in Italian thanks to the fine work by Rita Messori, an Italian philosopher currently at the University of Trieste. It is an excellent text.
2. This letter was sent by Sert when I was a student and he was Dean in Harvard. His ideal school of architecture was never realized, although some schools in Europe have parts of it.
3. In annex 2 and in annex 3 this specificity of the architectural knowledge is analyzed. More on web www.arquitectonics.com
4. See La *Topogenese: Fondements d'une Architecture Vivante*. Anthropos. Paris. 1996. Spanish version in La Topogenesis. Edicions UPC. Barcelona. 2000. Also *Architecture and Dialogics* (In press) with Bakhtin's inedited writings in Spanish, and articles in English and Spanish by Josep Muntañola. Edicions UPC. Barcelona 2005.
5. Main books by Bakhtin in English are *Art and Answerability* and *The Dialogical Imagination*, with the excellent translation by Holquist, published by the Texas University Press. Austin. USA.
6. See annex 4 with a summary of my research on children. See web www.arquitectonics.com for more information.
7. The subject of the International Congress of the International Association of Semiotic Studies in Dresden, in 2000, was the machines and the semiotic paradigm. I presented two contributions there on the impact of the machines in architecture, both in design, in building and in social use. However, the proceedings of this congress have still not been published.
8. I have analyzed this subject about the real and the virtual dimensions of architecture, in the newsletter *Arquitectonics* issue num. 1 "*Architecture and Transhumanism*", (Josep Muntañola editor) Edicions UPC. Barcelona 2002. Also in the proceedings of the First International Congress *Architecture Mind Land and Society* in Barcelona in 1996: "Topogenesis: Social Sciences and Natural Sciences". Editions UPC. Barcelona1998.