



Socrates



EUROPEAN ASSOCIATION FOR ARCHITECTURAL EDUCATION

ideas and reflections on
Architectural and Urban
Design Education
in Europe

EAAE Transactions on architectural education no 28

editor Constantin Spiridonidis

**Ideas and Reflections
on Architectural and Urban
Design Education in Europe**

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Editor

Constantin Spiridonidis

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Ideas and Reflections on Architectural and Urban Design Education in Europe

Constantin Spiridonidis

Aristotle University of Thessaloniki, School of Architecture, GREECE

ENHSA project has as its main objective to create the conditions to support initiatives which would facilitate schools of architecture in Europe to develop a dialogue, ensuring better communication and collaboration among schools, in an effort to achieve the aims of the European policies regarding the integration and harmonization of architectural studies in Europe, so that the diplomas obtained would allow for easy mobility of the professionals. As a result, a number of events have been organized in the framework of this project, one of which is the Meeting of Heads of Schools that has been running consecutively for 8 years and, which for the last 4 years, has been funded by the Socrates program. In addition, parallel to the Meeting of Heads of Schools, the ENHSA Thematic Network developed sub-networks specially oriented towards teachers. As the Heads' Meeting embraces the decision-making body of the schools of architecture, the intention was to develop activity designed specifically for teachers, which was, in fact, the primary objective of the EAAE through its initiatives, conferences, etc. Therefore, the sub-networks incorporated meetings with a focus on education, that is, the teaching practices and pedagogies that teachers develop in their schools.

Two years ago, in the framework of the sub-networks of Architectural and Urban Design schools of architecture in Europe were invited to submit a maximum of two cases per school, describing how they teach. The outcome of this cooperation was a collection of papers printed in two volumes entitled "Monitoring Architectural Design Education in European Schools of Architecture" and "Monitoring Urban Design Education in European Schools of Architecture". These two volumes in generated material for the workshop *Ideas and Reflections on Architectural and Urban Design Education in Europe: a follow up* forum which took place at Hania Crete from 1 to 3 September 2005.

It was considered valuable that this material lay the foundation for this event and it was the organizers' aim that the meeting will not involve a regurgitation of the material itself, but that the material be matter to build on and provide sufficient food for thought for participants to reflect on the present situation in terms of architectural and urban design education in the European context. For practical purposes, the two subject areas, architectural design and urban design have been combined in the agenda, but this did not hinder us from dealing with each of the areas separately, when necessary, and that was not an obstacle to our covering the material as thoroughly as possible.

As far as the *content* of this workshop is concerned, it was not organised with the perspective of inviting people to present cases, as is normally done in workshops. We felt we already had volumes of valuable material on hand for us to work with. As a result, we invited a panel of people who would not be directly connected to the material under discussion, that is, they would not be the author contributors, in an effort to ensure objectivity, variety and, most importantly, to intervene and expand on the ideas already presented by the authors. An exception was made, however, with **David Willey**, in Plymouth School of Architecture as an invitation was extended to him, although mainly as a way of honoring him for being the recent recipient of the EAAE Prize in writing on topics concerning architectural education. The rest of the colleagues are among the eminent teachers of architecture, whom I would like to present at this point.

Professor **Loughlin Kealy**, the Head of the School of Architecture at the University College Dublin, has always been present and active in all events organised by the Network and is a highly respectable colleague.

Professor **Josep Muntanola** of the School of Architecture, Barcelona, is a prominent architect-theoretician in the field of architecture, semiotics and architectural education as well.

Professor **Per Olaf Fjeld** of the Oslo School of Architecture is one of the "minds" of the Nordic countries, a thinker and a teacher. He is actually the President of the EAAE.

Emeritus Professor **Jean François Mabardi** of the Louvain – La Neuve School of Architecture, is a senior member of the EAAE, working and writing for many years on architectural education. Many of us had the opportunity to collaborate with him and to experience his way of thinking.

Professor **Marvin Malecha** is a distinguished colleague from the USA, Dean in College of Design, North Carolina State University, who was recently awarded with the title of "Best Teacher" in his country so his contribution is most inspiring.

Professor **Cesare Macchi Cassia** from the Second Faculty of Architecture of Polytechnic of Milano Bovisa, is considered to be one of the most eminent urban designers of Italy. He is very well-known internationally as he has been on juries for many international competitions on urban design. He works and teaches in the respective field.

I wish to thank all invited guests and all the participants for having accepted this invitation and for making the time in their busy schedule to participate in this workshop.

Chapter 1

Readings by

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Critical Observations on the Book:
Monitoring Architectural Design
Education in European Schools
of Architecture

Loughlin Kealy
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IRELAND

"we found parts but not the whole...."

Paul Klee on Modern Art

The contributors to the book, *Monitoring Architectural Design Education in European Schools of Architecture*, share a passion for architecture and a commitment to teaching. Its readers will probably share that passion and look for inspiration and support in its pages. They will find it. Perhaps some readers will approach this book thinking that the book promotes a tendency towards a common curriculum. There is still abroad a ghost – a "European agenda" for architectural education that equates convergence of purpose with promotion of uniformity. Ghost hunters will find little comfort in this book.

The introduction contains a brief editorial statement about its purpose: its aim is to "...offer particular information about different teaching paradigms" (strategies, methods and content) and to "...facilitate the exchange of ideas and research". The authors were invited to structure their contributions around four concerns: philosophy; pedagogy; the design exercises and an appraisal of the programmes/projects undertaken. My contribution to the review of its contents began with an attempt to grasp and describe to myself the scope and content of the contributions. The editors' grouping of the papers into broad categories, Initiations, Articulations and Advancements, reflecting different levels or stages within architectural education, was a useful starting point.

Was it possible to come to some general conclusions regarding the present position of architectural education in Europe through the contributions here? Not at all. This should not be surprising - the table below illustrates just how partial an insight one could achieve.

Number of Responses							
7	6	5	4	3	2	1	
Number of Countries							
1	-	1	2	-	7	7	18

Fig. 1: Table showing distribution of contributions

But it was possible to identify some of the principal drivers behind the papers, and to understand the educational ideas and pedagogical methods employed in the programmes described. This paper concentrates on this area and concludes with some reflections on architectural education that were prompted by what I had read.

The editor characterises the book's contents as "polyphony" – it is a description that suggests a shared common melodic theme (1). The theme is as elusive as a definition of architectural education – perhaps one could say that the multiple variations suggest that a common theme is there to be found. If my experience of reading it is a guide, the reader will struggle to find it. The book is demanding – the individual chapters require concentration and finding commonalities virtually impossible. Even if one confined oneself to certain limited parameters as a basis for comparison, one found that the variations meant that any direct juxtaposition served no purpose. For example, the length of programmes described ranged from forty-two weeks to six, and the hours devoted each week to programmes ranged from twenty to four. Direct comparisons could make no sense, nor could one expect simple patterns.

My search for commonalities or patterns led me to a different way of understanding the book as a whole – that it was an assembly of over-lapping themes and preoccupations that somehow reflected many of the concerns of architectural education, while providing "worked examples" of how particular programmes addressed them. It was not to be understood as representing completeness in any sense – it was a survey only in as much as a glimpse through a keyhole gives information about what's inside the door, and clearly there are explorations in architectural design teaching that are not reflected in this book. The key to its value lies in accepting its

incompleteness, so that individual contributions can get the attention they deserve. So it was possible to make out some preoccupations, some animating factors that suggested different kinds of coherence of intent and method.

Preoccupations/animating factors

The approaches I encountered in the essays were driven by four broad preoccupations: they addressed preparation for professional life; they set about awakening/ cultivating creative response; they were concerned with the exposition of theoretical/ polemical constructs, and/or they comprised detailed programmatic description. While these were the labels I put on the contributions, it would also be true to say that these labels were not exclusively the property of any single contribution – most contributions had more than one. A case in point is the contribution of _aglar and Uludag (2). The concepts put forward are beautiful and the programme is also characterised by hard-edged practicality. In almost every case however, one or other of these characters dominated.

Preparation for professional life was the single most pervasive characteristic. Not surprising perhaps, but within that broad orientation, there was a range of approach that reflected very different sets of perspectives on what such preparation meant and consequently differing intentions for the programmes. I labelled these approaches as contextual, challenging, test bench and integrating.

In the contextual approaches, the project structure reflects fairly explicitly the range of concerns in architectural design from conception to the realisation of a building. The programme described by Balogh is a good example (3). Projects in this category are typically concerned with the constraints and opportunities of real sites, and the end product that is sought for mirrors "real world" requirements (eg. Hacıhasanoglu)(4). In these programmes there is clear emphasis on ensuring that students develop identified architectural skills such as representation, model-making, plan development and constructional strategies (eg. Floet)(5). It was somewhat surprising that the role and potential of digital media did not receive more concerted attention, with Grant's essay the only contribution that described a programme centrally focussed in this area (6).

Among the programmes centrally concerned with preparation for professional life were some that I labelled "challenging", in that they sprang from a critique of real world issues as these are commonly understood (Wiley and Gilbert-Scott)(7). This grouping comprised a rich and varied spectrum. Some embraced social issues such as design for universal access (Froyen) (8), while others explored the relationship between architecture and society through projects with a clear critical agenda, such as questioning the apparent dichotomy between reality and creativity – is it possible for the architect to be both socially responsive and to enjoy freedom of creative expression at the same time (Parnell)(9)? Yet another strand took a "test bench" approach in which various parameters set by real world situations were subjected to structured and intense examination in the design studio.

Finally, certain professionally orientated programmes set themselves an agenda of integrating diverse concerns within a consciously holistic pedagogic framework, taking the view that in this way, professional skills could be best developed. Two examples will serve to illustrate the range of approaches here. The first represents a kind of programmatic interplay. The contribution entitled *Origins: Introductory Studio Projects for the Study of Architecture* (10) starts from the determination to regard studio education as a place where educational objectives and subject areas are addressed. The introductory programme described by Ronnefalk uses the continuous production of work as a tool for reflection, with the instructors adopting a role that enables students to develop their own approaches (11). Here the outcomes are deliberately open-ended, again with the conviction that skills thus learned are central to architectural practice.

The second broad category of programme driver was the concern for awakening/ cultivating the creative response of the student. This kind of programme is close to everyone's heart: programmes whose approach is grounded in pedagogical experiment and where the excitement

of exploration and uncertainty bursts through the inevitable dryness of exposition encountered in any standardised format. One might say that all good teachers try to achieve that openness and excitement. This category reflects my recognition of the way some contributors chose to represent their intentions and their programmes. "What we seek is not a relearning of cultural codes, but letting the students rediscover the basic spatial experiences they have built into their bodies since childhood". This optimistic and affirming sentence is taken from *Structure, Space and Form*, and the description of the programme goes on to connect this internal spatialisation with the landscape of Norway and the inhabitants of its western sea edge (12). Its pedagogic approaches appeal directly to body awareness, using concepts such as the "silent language of space" to evoke an impression of activities with the power to engage students at many levels. Imaginative metaphorical constructs, involvement with the outside community, the conscious use of "play" as a learning tool and involvement with physical materials in constructing shelter, produced an emphasis on learning through a rich experience. Other contributions of course, had analogous ideas. The open studio idea as enacted by the Eastern Mediterranean University School, with the conscious interplay of approaches to programmes addressing actual problems suggested a similar richness (13). The language the authors use to describe the desired studio atmosphere is evocative – words such as "active", "hospitable", "democratic" and "competitive" certainly grab the attention. Valenti's essay is notable in that it describes a multi-disciplinary" approach and invokes various metaphorical constructs in the definition of its projects (14). Perhaps the real gain here is the power of these descriptions to evoke echoes in the reader's imagination and to prompt further investigation and experiment.

The third broad category of contribution comprised those that derived their content and methodology from explicitly established theoretical or polemical constructs. Conspicuous among them was *A Play with Architectural Textuality* which began with an exposition of constructs deriving from Derrida and which developed a discourse amenable to architectural exploration (15). To an extent this involves the students "acting out" the discourse and it would have been interesting to know more about the students' conclusions as a result of their experiences. Within this category also I had included those programmes that explicitly undertook an exploration of "design as research" (eg. Shotton, Betancour)(16), even though the content of programmes differed widely. I would include several of the contributions I placed in other categories in this one also – I have already cited the work of Caglar and Uludag in another context. It is possible to read those contributions that specifically addressed theoretical or polemical constructs against the viewpoint that architectural design, by its very nature, plays an ideological role in society. The point has been argued that, whether through construction or publication, architecture requires the operation of the market in order to achieve its cultural and social presence (17).

In one sense the fourth category is more precisely defined than the other three because it refers to the way in which the programmes are presented rather than to the intentions and purposes that generated them. In common with the other categories, this one includes programmes already classified under one or more of those already described. The category drew together diverse contributions that are characterised by their concentration on how the teaching is organised – the organisational sequencing of projects and teaching settings within the programme, orchestrated to achieve the desired outcome. In many cases the paradigm behind the programme was implicit, in others it was set out. In the case of the former, the focus tended to be on describing the narrative sequence of work and the outcomes that were sought. Examples of this approach are the contributions of Braatten, Boyd and Murphy and Katainen (18). Where the programmes were explicitly set out, they were almost embodiments of the theoretical positions adopted by the teachers involved.

"I have spread my dreams under your feet; tread softly because you tread on my dreams"

W.B. Yeats

There is a great deal of intelligence, passion and commitment in the programmes described in this papers submitted. The collection is full of ideas and one wishes it had existed many years

ago. However, I could not avoid two critical observations, both couched in general terms as one must, given the partial insight it was possible to achieve.

Most of us confront a fundamental dilemma in architectural education: it lies in the relationship between teaching, criticism and evaluation. Making the transition from one mode of activity to the other certainly requires pedagogic skill, but it also requires empathy and honesty. Fundamentally it is an extension of a necessary sense of respect for the task, the role and the student. In my reading of the book, some essays displayed a notable respect for their students as individuals who were embarking on a challenging journey – and that demonstrated as well that teachers were aware of their own position and of their obligation to open windows, to inspire, to advise and guide. In others the sense was of a more "instrumental" approach – where the motivation seemed more one of instruction, of ensuring that objective criteria demanded by the world outside were met, and that necessary knowledge was passed on. Here the teacher was the possessor of knowledge and the student the one who lacked it. Needless to say, architectural education has to open windows, evoke inherent creativity and inculcate knowledge. The effectiveness of design studio teaching in any given context will depend on the priority assigned to these complementary purposes and the ability of the teacher to devise situations that embody them. Here there is no escape from the fact that the ends cannot be separate from the means – the means have to incorporate the desired end.

One of the most difficult issues in education is that of knowing if what one does "works", and the contributors to this book were also asked to reflect on that matter and to give an appraisal of their programmes, their successes and failures, and to suggest how things could be improved.

At this level there was little sight of insightful reflection and appraisal. Many authors did not undertake this exercise, and few did so in a way that portrayed a systematic approach to evaluation. Perhaps the contributors just did not report on what is being done. There were some notable exceptions. Earlier I said that some charismatic teachers operate on instinct and experience. Evaluation is not a particularly inviting task nor an inspiring idea, and it may be for some it sounds like the death knell for inspiration and spontaneity. Nonetheless, its absence is hard to justify from a professional perspective. In many institutions, design teaching is increasingly subject to the same pressures as other areas of academic activity. Quantification of student performance is demanded and architectural programmes are being asked about such matters as progression rates. More and more, students and administrators ask about the basis for assessment in the area of design. But there is more to the matter than that. Attention to programme evaluation provides some objective measures with which to develop pedagogic methods.

Returning to the contributions in the book under review, it is also notable that the student voice was almost entirely absent from the appraisals where they existed at all. Clearly there is scope for a focussed investigation by teachers of architectural design into the evaluation of studio teaching. Such an investigation, by exploring what questions are asked and how the answers are incorporated into new programmes, would strengthen the position of studio teaching in the academies of the twenty-first century.

Some reflections on learning

Inevitably, a book like this will be examined from the perspective of its meaning for architectural education. The intention of the book was not to articulate a position, but to permit the readings to stimulate reflection on architectural education and perhaps to provide inspiration. For this reader they did stimulate reflection, although not in the way I had expected. Those reflections did not lead me to form conclusions about the state of architectural education in Europe, but rather to speculate on the philosophy of education held by the authors. In some cases this was clear – in others I was not sure what the authors thought about the underlying nature of their transactions with their students. In particular I found myself trying to understand the programmes and projects in the book as learning experiences as opposed to teaching strategies. Either way, one has little knowledge of the wider context in which the programmes are set.

My effort was partly stimulated by the language used by some authors to explain what was being attempted. There are many inventive teachers who are interested in the world of psychology and the work of Piaget and Bruner crops up from time to time in essays on architectural education. But quite often, effective teachers seem to operate as much by instinct in devising their approaches as by reference to models of learning. Relatively few of us have the opportunity to explore in any depth the effectiveness of our methods apart from seeing the outcomes in the form of work produced by the students. I will return to that issue later on, but for the moment note that we can rarely draw firm conclusions about longer term impact on conceptual skills acquisition that might favour one set of approaches above other. We have much to be thankful for.

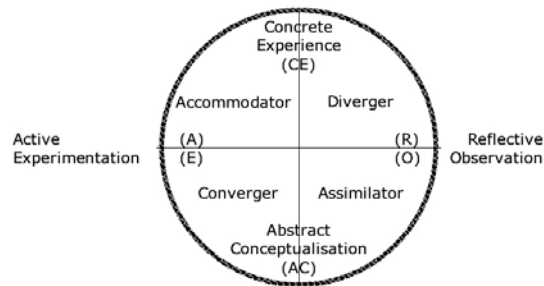


Fig. 2 Experiential learning and learning styles as envisaged by Kolb

Learning in architectural design involves a type of iterative process that evokes experiential learning as described by Kolb (19). To him also we owe the linked ideas of the "learning cycle" and of "learning styles". Kolb believed that experiential learning involved movement through identifiable phases of concrete experience, reflective observation, abstract conceptualisation and active experimentation to test implications, leading to further concrete experience, and so on. In conjunction with that model, he put forward the idea that each person has their own way of learning, and that this unique process involves a blend of four types of learner, but in differing proportions. These learner types are the accommodator, the diverger, the assimilator and the converger. No one person embodies just one of these, but the salience of each differs from person to person so that a particular mode is dominant. The dominant mode is not necessarily fixed for all time. For the individual, a learning experience that taps into that mode is likely to be most easily absorbed.

It is a persuasive model of learning. So much is required of the architect in contemporary society that there is a temptation to pack as much as possible into a curriculum, to create apparent richness of experience through complexity of programme requirements. The skills in architectural design are complex: the ability to move between the material and the conceptual, between different scales, modes of representation and methods of investigation and testing are, I believe, acquired rather than taught. Bateson refers to the process through which a person acquires the ability to solve crossword puzzles – an abstract skill of relating contexts and recognising patterns (20). The skills are acquired as part of the process of learning, almost as a by-product of the tasks undertaken.

Such a model might imply that the would-be educator, aware that students learn in different ways and that learning to be creative is a central concern, would devise programmes that leave room to breathe, space for students to find their own way. As well as being somehow appropriate, such an approach leaves open the possibility for transcendence. Dalibor Vassilly coined the word "metaphoricity" to describe a quality of architectural creative thinking, that kind of thinking that invokes a poetic vision in the everyday experience. It is also a quality that animates creative teaching and produces learning experiences that linger in the memory and shape the imagination.



Fig. 3 Project for a breakwater on the West coast of Ireland

In conclusion

I began this paper by saying that readers that expect this book to support a move towards a common curriculum will be disappointed. But there is a European educational project - one that is altogether more difficult and more worthwhile than the development of a common curriculum. It is to establish a common understanding of the fact that diversity is the key to systemic stability and the ability to adapt to change. In this book the reader will find plenty of evidence of that.

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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 Czech 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 advice 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 out¹: "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 Lluís 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 publications⁴, 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 knowledge⁶, 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'. 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 ⁶. 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.

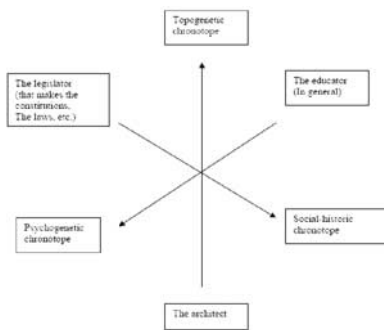


Diagram I: The three professions that need an architectural wisdom because they have to foresee the future in some way or the other (according to Aristotle).

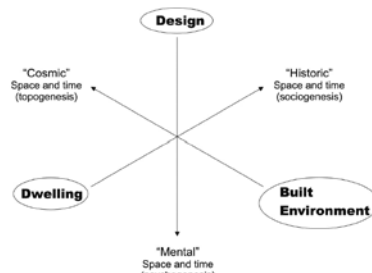


Diagram II: The three chronotopic basic dimensions of architecture

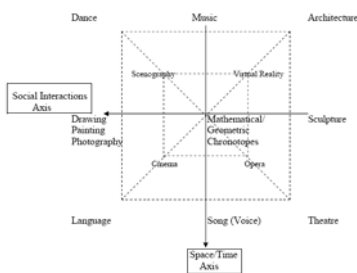


Diagram III: Chronotopic Structure of Intersubjective and Intertextual Communication

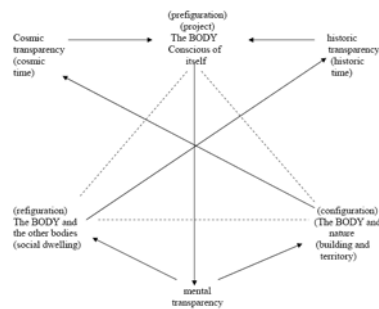


Diagram IV: The three architectural transparencies

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 Muntanola. 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 Muntanola 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. Barcelona 1998.

Chapter 1

Debate

Chaired by

Constantin Spiridonidis, Thessaloniki,
GREECE

Loughlin Kealy, Dublin, IRELAND

Without going over a ground I covered before, a couple of things occurred to me, partly just listening to another presentation of a "reading" and the insights gained from that. Also, in conversation, you realize just how much you inevitably edit or leave out from what you wanted to say, so I would like to add one or two things. First, on the issue of dealing with different scales of work, when you raised the question of this division between architecture and urban design, I know it is there for convenience and that it allows the organizers to structure events in certain ways, but at the same time, what I feel very strongly we would practice in our own school, and which is part of the fundamental skill in architectural thinking, is a connection between the larger scale and the detail. Part of the challenge, I think, for education and for developing this way of thinking that we have been trying to describe in elliptical ways is to find the means into that skill, that is, how to develop that particular mental ability to connect the large scale, the complex, the interplay of different insights, disciplines, etc. and to, somehow, translate that into an architectonic and constructive fact. I think, this is an extraordinary ability.

The other point I left out is that, as architectural educators, we have been far too timid about architectural education and what it has to offer. I think that the studio learning that most of us actually work with has an application to learning beyond architecture. It has something to offer to our institutions and other disciplines besides architecture, and this is one of the things that we are going to try to do in our own institution, that is, see how we can actually engage with other people and other disciplines so that they can participate in this kind of learning to some extent as well.

Koray Gökan, Istanbul, TURKEY

I will start by thanking both colleagues of mine for having faithfully read the books thoroughly, as I, personally, found it very difficult to find sufficient time to do so. Anyway, I believe that architecture is an individualistic enterprise, so why should architectural educators try to find a common ground to teach this subject? Also, shouldn't the studios differ? I am afraid that after 35 years of teaching what I have to say to you is that I do not believe in rules! Of course, I have a background in the field to be able to express such opinions. However, I would like to invite you to react to my feelings.

Josep Muntanola, Barcelona, SPAIN

The main point, in relation to that opinion, is that there is no contradiction between the individual and social. The second point is that the individual or specific artistic or ethical character found in the studio differs with each professor and this individuality is basic to architecture. Surely, the objective is *not* to homogenize design studios and make them similar, but, on the other hand, I believe that there might be a danger in perceiving the design studio as an individualistic entity, since the design studio is usually specific, with a specific perspective beyond the reality and main aspects of architecture. After all, what is important in architecture can differ from one studio to another. However, the specific point referred to here is that what is important in architecture is the *private or public, with a particular public view* and not the individual. As a way of distinguishing this notion of the individualistic character from the specific perspective mentioned above, I would say that, of course, as an educator, I would not want anyone to tell me how to teach my course, I will teach it as I want to – this freedom in teaching is very important for the sake of not stifling individual creativity and ensuring divergence. On the other hand, this fact does not assume responsibility for what the individual produces. One studio can be good in one thing while another studio in something else, so that there is no such thing as one "universal studio", but there is a kind of complement or *equilibrium between the specific* and the personal and the student should be trained in that; otherwise, there is fragmentation, and we will be faced with students following only one tendency or another, depending on their individual tutor's orientation, thus missing out on a more rounded, "institutional" point of view, and this is where I try to find a balance.

Patrick Flynn, Dublin, IRELAND

First, I will make a short statement, which I will rephrase as a question at the end. Two conclusions matter and, as a launching point, your point, Loughlin, about the quote from Paul Clay on the difference between the parts and the whole and that the parts can be known whereas the whole cannot. As an educator, I wonder, does the whole actually matter? Perhaps, a theme for us to look at this week is, *is the conclusion important?* I see that from two points of view, first of all from the educator's and then from the student's, in terms of what that actually means. As a researcher and educator, research, what we all have in common, has three parts: the beginning, the middle and end, yet, basically, most people focus on the conclusion. "What is the end?" "What conclusions have you drawn from that?" What strikes me as interesting is that the conclusions are, then, bound in a book and goes on a shelf for a couple of years until someone else researches something very similar, and the first thing they do is look at your conclusions and try to pull them apart and write their own different conclusions. Moving slightly aside, when I think in terms of educational research, what comes to mind is Gardner and Saville-Troike, who have spent a great deal of their time defining the seven types of intelligence, an idea which eventually became accepted, and Gardner made a small fortune touring and giving motivational speeches on these. Then, once the seven types were accepted by the culture and received publicity, I guess, that as a speaker on the subject, he would have been motivated to first of all mention that he has invented two more types. Then, if one lives long enough, one would end up even contradicting one's own conclusions! So, the question for us teachers to consider, then, is whether our conclusions are really important, and if we transfer the question to students, they would ask us, educators, if we were obsessed with end product.

In reference to your exercise with boxes, Loughlin, I think it is a fascinating exercise. I also noticed that what you did is exactly what I would do, so that when new students come to college, I take the best student work and pin it up as a way of demonstrating our standard work. In this case, you did the same by showing the two boxes which were quite successfully reassembled and it looks all so pleasing _ that is the obsession with end product that we have as educators! However, I often think that the students who were most successful were the ones who could not reassemble the boxes, who could not follow the instructions or understand the instructions and who had to deal with the frustration of not wanting to do that particular task, or who experienced the "I hate this" reaction or those who were frustrated, perhaps, because they wanted to do something else. It is these students that learn far more. Personally, when I set exercises and they work, I know that this may not happen again; and when things go spectacularly wrong, I realize that, surprisingly enough, there is so much to be learned from it!

Regarding the very interesting point made earlier about courses in medicine, it is worth noting that a medical course does not include any history lessons or rather that history as a subject is not as central to medicine or other fields, for that matter, as it is to architecture. This goes back to the relevance of knowledge, which is what we are building on and best described as a series of spirals, where on completing a cycle, the person moves on to something else, using one's experience to move on again in a constant state of change. On arriving at a conclusion to my statement, I am wondering, *is our primary concern life-long learning?* Is that what we should be aiming at rather than being obsessed with putting things in neat-little packages? When we give our students a task or series of instructions *are we concerned about the learning process or the end product?*

Loughlin Kealy, Dublin, IRELAND

The shortest answer to that is to say that conclusions matter as long as they are not concluding, and this is really why Kolb was able to present a model of learning as a circle. As you correctly said, what Kolb was saying is that when you have completed this virtual circle, the next time you encounter something you will experience it differently because you are no longer the same person you were before and so life goes on. However, the important thing about conclusions - and this is what we have tried to engage in our own practice - is that we ask students at the end of their projects to have a period of reflection, and then to see what their project actually repre-

sents as a phase in thinking about the project; in other words, if there was another phase to the project, where would they go from here? I think that this is an important point for students to understand, because they may be drawn to a certain conclusion, but the story goes on and is actually not concluded.

Also, you asked "does the whole matter" and who it matters to. I think, it matters to the educator because when you have an idea of what the whole process might entail, it does allow you to be very free with the actual elements that go to make it up. Without an idea of what the process is, one inevitably becomes very rigid about what one allows to enter into the process. So the answer is positive, but there is more to it than that.

Josep Muntañola, Barcelona, SPAIN

I like to use the word *experimentation*, which does not involve chance or not knowing the rules, but there is a great deal of possibility for trials or experimentation under a set of similar conditions, leading one to win or lose. In this sense, the studio should be creative, not by chance, but through experimentation. The other point I wish to make is that, as Aristotle advocated, the educator, the legislator and the architect all have something in common -- they are expected to forecast, but also assume responsibility for their forecasting. As a result, on being held accountable for their predictions, they cannot answer on justifying their forecast by relinquishing responsibility on grounds of creativity, since this attitude could lead to ethical problems. Therefore, the issue here is *responsible experimentation*.

Juhani Katainen, Tampere, FINLAND

I tried very hard to read through this book on which this discussion is based, and I should add that the book was well done. However, like some other colleagues, here, I also had some difficulty due to the fact that I do not speak English very well. Yet, one day, I found on my desk a thick book from the United States where somewhere in Florida a similar meeting as this had taken place with teachers discussing their teaching, methodologies and aims. On reading that book, I was amazed that I had almost understood everything. I think that what they were aiming at is classical education. Nevertheless, the point I wish to emphasize is that the book was very well written and comprehensible based on facts at all levels, truths and in line with our European directives. I must say that I was somewhat envious at the way those people expressed so clearly what they want to get from architectural education and how they are going about getting it.. Maybe, what helped them is that they have a clear vision of wanting to change this culture of Modernism and bring it back to the old. I must say, however, in comparing my own thinking in terms of how I have been teaching, my students and I take it for granted that these are the kinds of houses we want to make, at least I do not question myself, because I was born in the period of Modernism and believe in it. I also found it interesting to read and think critically about the differences in the historical development, leading me to question who and what is right and what we should actually reflect on. So, in short, what I want to say is that when you go home, even if you might be turned off by the fact that you may not like Classicism. I urge you to take the time to have a look at the book and focus on the words. Perhaps, we can make another book based on our education as this is very valuable information to know and understand, but we should make it as simple as possible, writing about the difficult things we do in simple terms, so that our students or anyone, even those outside our field, could read and understand us.

Ali Uyanik, Aarhus, DENMARK

I do neither research nor administration. My only interest is the making of architects, so I will bring another element into the discussion. What we do, basically, is take young people who have never seen a violin before in their lives and teach them how to play a violin, understand the violin, understand the theory of music, possibly play in an orchestra, have the chance to become the leading violinist in an orchestra and ultimately have the chance to become the director of the orchestra and compose music in a very short time. For this reason, I believe that the makeup of the stu-

dent, that is, their *context*: the place and society they live in, cultural background and previous studies are all very important. When we do not take into account the student contexts from various parts of Europe, then our discussions are far too general!

For example, most of my teaching experience comes from Denmark, and I can say that Danish students are not intellectual and Danish culture is not an intellectual one. The highest point of Danish architecture was when the craftsmen became architects. So, on hearing the speech from Barcelona, I thought it was great, but really wondered whether it would work in Denmark. It seems to me that it would not, because nobody would understand it as there is no culture for it. Therefore, the question is how to *diversify this general thinking* and make variations of it, so that each culture, each background brings into it its own context. Also, I agree with my colleagues on the point made about "systems". *Somehow, when we think back of our school days, all we seem to remember is teachers, not systems.* So, the goal of education should be good teachers and interested students rather than systems and programs.

Cânâ Bilisel, Ankara, TURKEY

I teach Architectural Design Studio Projects and Urban Design at the Middle East Technical University in Ankara. Right from the start, we discuss the relationship between the whole and the parts with reference to the society and cultural background in which we practice or apply architectural education. Therefore, while reading the book, I felt the need to understand the context of each course. The teachers explained the philosophy of their courses, the way they teach, methods, concepts and so on, but what, I think, was also important for them to mention was the context and philosophy of the respective schools, since I believe there are different schools of thought in architecture. There are different methods in integrating and articulating theory and practice, for example, through modules, though they are not used in our School. However, in many schools in Europe there is the understanding of integrating theory and practice within the studio through seminars. But, there are other courses as well, such as Architectural History courses that provide a service, besides providing a certain cultural background to future architects.

Finally, I would like to know why you decided to separate or make two different books on architecture / architectural design and urban design when these are now being discussed in an integrated, single platform. Although I think that this is very good, and I hope that we will be able to concentrate more on each field as well. As far as urban design is concerned, there is the problem, among others, that it is positioned in *between* disciplines. In conclusion, I think that we need to discuss the philosophies of teaching in the schools, in general.

Constantin Spiridonidis, Thessaloniki, GREECE

Thank you for bringing up that very interesting question, which I have given a great deal of consideration to, and the decision to separate the subjects was, in fact, made in an effort to bring about their unification later. The reason for this separation, in the beginning, was that we did not have precise information about what was actually happening in this domain. The information we had was based on empirical evidence derived from various experiences and from merely sensing different cases, which led us to deduce that in many schools of architecture urban design and architectural design are considered as rather different subject areas. Nowadays, with the social aspect of space criticizing the architectural studio, from where the social sciences have practically escaped, it appears that urban design courses treat urban space as what remains in the schools of architecture articulated with the social, cultural and anthropological thinking. As a result, we wanted to verify our assumptions and investigate whether things were as they appeared. As you can imagine, everyone acts on the basis of the collaboration and experience one has with his / her own school, so that was just a beginning.

Another reason for making two different books was the fact that there is a very strong contradiction and sometimes polemical environment between the teachers that teach architectural design and those that teach urban design. There is already a gap or chasm in the schools of architecture, where one group does not want to speak to the other, with urban designers not being regarded as design-architects and architects seen as people who live in their own world

by the urban designers. Therefore, our objective is to work toward bridging the gap between them.

An interesting outcome on having distributed the invitations to the various schools of architecture was that we received proposals for texts which were presentations of urban design courses, asking for them to appear in the Architectural Design book. As you probably noticed, in the volume of Architectural Design, there are several courses that concentrate on Urban Design and, despite the fact that there was a volume dedicated to the subject, the texts were specifically requested to appear in the Architectural Design book, which means that the authors did not want to present themselves as urban designers, even if they teach the subject. Consequently, this made things easier, especially for the articulation that we wanted to achieve. Moreover, it is worth noting that most of the authors who agreed to accept our invitation and are with us today are urban design teachers, which leads us to assume that it is these teachers that are actually interested in sharing their views on teaching the subject area. In addition, most of the people who wrote to apologize for not being able to attend this meeting were mostly urban designer teachers as well. By the way, I thought I should mention this statistical information merely to animate our discussion.

Nevertheless, the main point is that we need to work towards bringing the two cultures closer together, which is a necessity also stressed by both of the previous readers, so that between the detail and the city there lies a common culture that motivates architects and urban designers to develop a dialogue, ideas and initiatives in order to find various educational conceptions that will help this project.

Finally, regarding the question of "context", I would say that these two books do not contain much information on context, simply because we did not ask for it. The authors were asked a few specific questions that provided a framework for presenting their courses. These questions, however, revolved mainly around the course(s) being taught, philosophy and methodology, but made no provision for "context", despite its importance, since it was not considered to be the focal point of this particular inquiry, but unquestionably, the issue of context would be worth exploring in a future project.

Josep Muntañola, Barcelona, SPAIN

As a way of addressing a few points raised earlier, I wish to say that my grandfather was Danish, so I know Denmark very well. Naturally, what I said earlier is not culture-bound or confined to Barcelona, but represents a general idea about the situation of the social sciences. Surely, when I talk to students I do not enter into long theoretical discussions, but I do prepare some theoretical reflections related to the present state of architecture when appropriate. Certainly, the most important factor in education is the teacher, not just in architecture education, but in education in general. If we reflect on the good teachers of the last 50 years, we will note that what they all have is knowledge and culture that extend well beyond their disciplines, so that the quality of their teaching is not a coincidence...

Christian Huetz, Regensburg, GERMANY

Regarding the two subjects, I should mention that I am not an urban designer, but do architectural design. My question is based on the assumption I have heard here that the teaching of architecture is to produce the architect. I wonder, is the ultimate purpose of architectural education to produce architects for professional life? I simply cannot say that we do the studios, the projects, etc. and in the end, all for the goal of turning out architects. I think we teach architects, but our task is not to "grow" architects; therefore, our question is one of content: *what do we teach?* If we were to ask around the room, we would certainly have lots of ideas on methodology, so our concern is not so much *how* to teach architecture, but *what* to teach in architecture.

Emel Aközer, Ankara, TURKEY

First of all, I wish to thank all those responsible for the organization of this conference. I think that

Prof. Muntañola has already made a very important distinction between the dialogical and monological approaches, and starting from this distinction, we may well say that the dialogical approach requires going beyond the existing paradigm of teaching and learning. In this case, I actually do not teach at all, I just design a learning process, putting forward my material, including my own ideas approaches, knowledge of a technical and practical nature, and all this material is open to discussion. I, then, ask the participants, who are sometimes also colleagues, not just students, to consider the material in terms of what can be done with it. In this way, we are all designers of a dialogical process, which cannot be estimated at the beginning. Of course, we can say that the end product, as well, cannot be evaluated from the start, but it is, actually, the *design* and *process* that are important. Anyway, at least, I do try to go beyond the existing paradigm. Indeed, there are different paradigms in architectural schools, even different paradigms competing in the same schools. My own approach at the Middle East Technical University may not be the mainstream, but what I will refer to here is on a particular paradigm, which is not necessarily my own or that of my school. These paradigms are different, persistent and competing. I do hope that we will have the chance to further discuss these issues during the course of this meeting.

Koray Gökan, Istanbul, TURKEY

I have a very basic idea of what I came here for. After much discussion in our school, there have been many changes: we have changed the curriculum in line with changes that are happening in the outside world, and these changes are inevitable because we live in a changing world. So, what we have actually done is combine the architectural design studios with other studios. In my case, I have been asked to combine the environmental design studio with architectural design. But, to get back to Josep's question, I am afraid that I am not very experienced to be able to answer your question. Even with 35 years of educational experience behind me, I must say that I am confused, at this point, because what we do in urban design is deal with open-ended projects while in architecture we deal with closed ones. The problem arises when planning the program and trying to evenly distribute the time between the two. The reason I am here is to listen to you, knowing your experience, Josef. I take the liberty of asking "silly" questions to my colleagues because I feel that I am in a relaxed enough environment where my mind is allowed to think freely. That is why I enjoy making my students laugh when I talk to them. However, what we should bear in mind is that the 21st century is not our era, it belongs to our students and when they gain enough experience, they will be able to answer such questions on their own, easier than us.

Tom Jefferies, Manchester, UNITED KINGDOM

I teach both architecture and urban design. I suppose that what has been asked is a kind of linked question. It could be seen as a tension existing between the technical-professional aspects of architecture as a discipline and the cultural aspects of architecture as a subject. I think it is possible to teach either one independently of the other; so that to the question: "Is it possible?" we can say that it probably is, and if so, is there a problem if we are producing just technicians who will in effect act as architects?

In the United Kingdom, a large percentage of the buildings are produced without architects: is that a problem? If you argue from the point of view of the professional architect, you may say that it is because you should be making more money out of that work, but you could also argue from a generalized cultural understanding of what a building is and with the awareness that when builders put up buildings they look like buildings. Therefore, the question seems to be, is the teaching of architecture a problem if it is taught as a purely technical and professional activity or as a cultural one related to what is fashionable and related to a wider milieu?

The second question refers to what Constantin mentioned earlier about a "common culture" between architects and urban designers, and I think that is a big question, as well. In this room of urban designers we can detect that there is an architectural slant of them. I would be interested to know if there are any planners here because my experience of working with planners is that they have a very different starting point from architects, almost diametrically opposed in

some cases. There is an argument, then, for setting up urban design as a kind of discourse about dislocation and adversarial positions as a starting point or negotiating resolutions. But, to come back to the point about combining urban design and architectural teaching, urban design does dislocate itself to some extent from generalized architectural teaching and sits in the space between planning and architecture. In fact, there can be an interesting discourse here as to where the merging of the disciplines actually starts to happen.

In architecture, this discourse is more defined because the limits of the subject area are more widely known. If we have a building or a house to build somewhere we are nearly always faced with the urban aspect, of course, because we need to think about the contexts we move into, but in teaching, there is quite a difference. When we teach architectural design there will almost certainly be the urban network to consider but the teaching of urban design is different from the teaching of architecture. Anyway, building is the synthesis of the various teaching inputs, which is taught by different teachers, at least in our school, and I think that the boundaries of every aspect should be well defined and these aspects should be taught separately at times. But, this is not always the case, as I have a friend who teaches in landscape and uses very different methods and approaches from I use in architecture. Therefore it is sensible to perhaps separate the two in teaching, and then think about where we can pull them together.

Christian Huetz, Regensburg, GERMANY

I will go along the same lines. When you have to build a house, you research the urban aspect of it, the context. But when you teach it, it is quite different. Of course I have to do it when I teach architectural design that there will be the urban aspect. Teaching architectural design is quite different from teaching urban design. You have to think about teaching and the effective outcome. In architectural design you have to teach several issues such as construction etc. and you can separate them and teach them. It is very important that we get the borders of every aspect that should be taught separately I do not know how. A colleague of mine teaches urban design and his methods are very differently from the way I teach architecture. It is important to realize the differences and to find ways of pulling things together.

Ali Uyanik, Aarhus, DENMARK

I think that Constantin's answer was very revealing about what is happening. From my experience, the people who choose the Urban Design Planning Department are able to analyze and have analytical or strategic thinking, but are usually, I am sorry to say, poor in form quality. However, they can formulate themselves very well, and that is why these teachers can write. I have been trained in architectural design, and this explains why I cannot write, but of course there is also the problem of having to function in foreign languages. Basically, there is a general problem and it is, precisely, for this reason that we need to refer back to the student and see what type of student chooses a particular line. However, this does not mean that the line cannot be crossed. In our school it is done, and in our Department, we work with both towns and buildings. My students work with buildings in towns, town and urban landscapes, designing on a larger scale in the same studio, at the same time and same contexts, referring to the same contexts and working at all levels. So it can be done, and the problem lies simply in understanding, in one's own mind, what the city is. In my opinion, the divisions between engineers and architects and, later on, between the urban designers and architects have caused only problems to the profession, so I am very pleased that we have combined these two together and hope that this trend will continue.

Cânâ Bilisel, Ankara, TURKEY

I also agree that we will benefit considerably from discussing these subjects on one platform. On the subject of urban design, I believe that to be an urban designer or to be a skilled architect in urban design, you need the necessary abilities to produce a good design; that is why, I believe, architects should develop skills in urban scale, because it must not be taken for granted

that a good architect will automatically find it easy to work on urban scale. From my own experience with students, they tend to get lost when they begin working on larger scales, in the city. After all, understanding the various scales is not a simple task in the beginning. The other point is that it is very important to build student awareness of the socio-cultural and economic aspects of cities and the production of urban space. There has been a general tendency, in recent years, to concentrate more on the logistics of producing large-scale architecture through the use of geometries and especially through the use of computers, thus providing a new logic of producing large-scale architecture. Naturally, it is quite exciting to venture into a new logic, but what about the social aspects of the city? In Turkey, for example, there are so many different processes that go into producing our cities, other than those involving architectural skills.

Paola Michialino, Newcastle, UNITED KINGDOM

I teach Architecture in the 1st year and Urban Design in the 5th at the University of Newcastle upon Tyne. While listening, I have been thinking that in our School we kind of teach the Urban Design course in collaboration with Architecture and Planning, and I am quite concerned about the 1st and 2nd year students who come to the School with the impression that they need to learn the computer in order to create forms and that these skills are essential for them to go into practice and earn a living. On the computer, they work on two dimensions, so, it is extremely difficult for them to work on three dimensions and think in terms of spatial object because the architecture is flat and they do not see the connection between the plan and the section, which is extremely worrying for me. However, what I find is extremely interesting is the collaboration with the planners because besides the three dimensions, they see other dimensions: the plan and their third dimension, time. This, latter dimension is quite different from that of the architect, whose third dimension is the eye for a building or an object. I think that the interest in urban design is really the multiplication of those dimensions and that the architectural approach cannot ignore the third dimension of the planner (time), just as the urban planning approach cannot ignore the architectural third dimension (the eye). Therefore, somewhere, we need to emphasize some scales in one and some in the other, but we cannot ignore one or the other.

Christian Huetz, Regensburg, GERMANY

Luigi Snozzi uses a very nice expression: "If you are designing a house, think of the town behind you", and I think that says it all -- that's it!

Josep Muntanola, Barcelona, SPAIN

There are so many questions that it is impossible to answer them all, however, the discussion is moving in an interesting way. Nowadays, a lot of people are talking about the diverse paradigms being used to conduct a studio, and in defending this trend, we can say that, on the one hand, we cannot impose mixing things that will not produce any kind of innovation, but that, on the other hand, this diversity of paradigm is not wrong and does not, necessarily, go against the quality of the output, though it may. The basic point of the dialogic-cultural is that if there is diversity of cultures, this helps innovation; it is not against it. In fact in the history of cultures, there are many examples or situations where much innovation occurred in the presence of people from various cultures. This is all very positive and it becomes negative only when there is discord -- history has shown us that!

The other point concerns the diversity of disciplines, which is a dimension which has entered our discussion. Of course, there is Urban Planning, Architecture, Construction, History, etc., which are, of course, independent in some ways. Again, this is not a bad thing, but it can be at a moment when there is a total contradiction. An example of this would be if the Urban Planning Department taught architectural form and the result would be a bad form. The perspective of the urban design could be good, but if they taught how to make buildings and did not know how, then this would be negative. Therefore, my point is that the problem does not lie in diversity, but adversity, that is, a combination of the wrong disciplines, an over concentration of unrelated disciplines or

conflicting paradigms that would only serve to confuse the student and increase his / her load. In short, we should maximize cooperation, but not force the situation in such a way that would bring about an unnatural outcome or that would create problems or exacerbate existing ones. It seems to me that an effective means of resolving problems is through dialogue between disciplines and paradigms, which can be different in each school, but not simply expect to seek solutions through some form of limited cooperation in the studio.

As far as the computer is concerned, it can help us locate the problem and see it very clearly, but it does not solve anything; on the contrary, it can make the problem worse. Therefore, my suggestion is that you use the technology to see where the problems lie in your teaching, but, then, you will have to investigate the origins of these problems.

Loughlin Kealy, Dublin, IRELAND

Just a brief comment to connect what was said before, not by way of offering solutions, of course. When the question was asked of whether the whole matters, which also ties in with someone else's question of competing paradigms working within a single institution, it struck me that I really cannot say how this question is resolved in very, very large schools of architecture. Actually, I must say that I have no real conception of how architectural education can be described in such a large setting, as I have never actually seen it described in such a large school. There is a kind of assumption, I think, akin to what I mentioned from my own educational experience that somehow there is learning that takes place, made up of experiences that are absorbed, and that the process, in some ecological way, works itself out.

To a certain extent that is probably true, but I do know from my own experience with a small school of architecture that there are the converse problems that need to be addressed. When the scale is quite small, there is the risk that a single type of orthodoxy becomes the norm, so that there is a delicate balance to be achieved between providing a secure environment where students can learn, and taking seriously the fact that one has an obligation to be a laboratory of ideas and leave open those options. Also, I think that kind of perspective of the school requires a meta-understanding of what one is trying to achieve in architectural education, so that what we're looking for is an enabling framework that still has a certain coherence to it that is recognizable and with which people can work.

To my mind, this is the challenge we face, and it is the one you raised when looking at the various contributions from the schools and asked the very sensible question of how we know the contexts in which these exist. The answer is that we do not, but there is a limit to our understanding in that because, obviously, a course which, say, is a module within a course that has 10 of these modules is in a very different situation from a unitary course that has a program that takes students through from beginning to end; these are different animals. So, what I would say in terms of discussions like this is that, somehow, as we have these discussions, we have to work at several different levels, at once, recognizing where the concerns that people voice are coming from and their contexts and if they do have some resonance in a different context. Therefore, if I hear someone say, that they may have difficulty because there are competing paradigms, here, then I hear echoes of that from my own very small school, where I know there are different paradigms, but because there is a different overall philosophy, they can coexist. It seems that part of the adventure that Constantin and others at ENHSA are engaged in is to provide this larger framework within which continuing dialogue is possible, so as to avoid our becoming fixed in our own particular framework. Nor do we assume that the answers we have are relevant to the questions people are raising, but that there is a learning process, which I have found over the years to be very liberating with discussions of this sort. This can be attributed not so much to the fact that you are providing answers to my problems, but that my reflections on what you are talking about cast some light on the questions I would ask myself.

Chapter 2

Readings by

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A Critical Reading of
Monitoring Architectural Design
Education in European Schools
of Architecture

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Informative

This is truly a book of good intentions, but it is always difficult to measure how well a book of this type is able to present an overall picture of architectural design education. There are many outside elements that will inevitably influence the author's comprehension of a design program but equally so the reader's interpretation of the presented material. This is a very serious work, straightforward in its explanations of what is going on in design education; *Monitoring Architectural Design* has clearly chosen to hold its subject matter within the confines of "monitoring". As a reader, the quality of the monitoring process becomes the focus, thus the anticipating future application and further development seems less clear.

Individual approach

The book reveals that there are a variety of approaches in the administration and pedagogy of design schools today, and that each school has its own particular focus.

Individuality as a quality

Certainly this individual approach in teaching has positive input for design pedagogy, but it also brings up a number of other signals about architecture. It is very difficult to find a common denominator within an approach, let alone a focus. Expectations of what architecture can and should achieve vary greatly and the definition of these expectations changes rapidly. The book clearly states that there is no common resistance force or platform, but rather a set of priorities that generates a myriad of programs.

A mix of language

We share an architectural terminology that is present in most of our programs, discussions and papers, but the individual definition of these terms varies greatly as they have been reinterpreted and given subjective or private meanings. The way we use our vocabulary offers variation in interpretation, but as the book states architectural written language also suffers from instability in that we no longer have a common design terminology.

A generation gap

One weakness with the book lies in understanding what the above changes have meant to the younger faculty and students. One has the feeling that "monitored material" relied far too much on a generation that still had a memory of a common architectural base or belief. It is true that age wise this cut may vary from country to country due to politics and cultural changes, but it does not lessen the importance of understanding this age gap and how the younger faculty views their own situation.

A course description

In adhering to the idea of "monitoring", the book becomes essentially a course description. A program and its results are presented, but what is difficult to gain from this material is the creative approach or process within the set program. This will not necessarily be reflected through a course description, nor will change the expectations which can become apparent in the straightforward result presentation. This problem is particularly true when considering the impact of the aforementioned generation gap.

Diversity

Is there a lack of ambition? Most seem complacent with their programs, but fall short in estab-

lishing a direction and a clear profile. The program can change, but the concurrent discussion on profile comes after the fact or simply does not occur with the same intensity.

The lack of a common resistance force

How to teach a subject so transient when its resulting product remains so constrained? Architectural education can be everything and nothing. In examining the book farther certain categories of pedagogical approach became apparent.

1. Schools that embrace a set tradition, outlook and method of how to become an architect
2. Schools that have their primary ambition to place students in the profession
3. Schools that place emphasis upon the understanding and development of architectural space and its theory
4. Schools that offer a little of everything

Confusion in argumentation

How can comparison work effectively in promoting an argumentation, when the comparison lacks an accepted or clearly understood common base?

Innovation and rare knowledge

Teaching "information" is perhaps the least important area of an architectural curriculum today. The most difficult area is probably related to innovative and rare knowledge. And to this end, the development of the student's method and the program content are pivotal in generating inspiration. To be able to focus on the creative process requires concentration and a more coherent understanding of motivation within this process.

Reflections on my teaching experiences at the Oslo School of Architecture and Design

In relation to any type of teaching or pedagogical profile, it is important to be able to communicate an understanding of the subject matter, but also to have a clear perception of the specific qualities and limits of the level at which you are teaching. To teach in a fifth year studio generates another type of pedagogical profile than that of teaching the first year. In order to communicate, some sort of a base comprehensible for both the teacher and student needs to be put in place.

Louis Kahn once said, "You can only teach that which is already within yourself". In relation to teaching in architecture, I interpret this to mean that each student and teacher have a particular given talent. But, this talent does not necessarily transform into creative ability. Only when events, knowledge or inspiration no matter how seemingly insignificant are able to connect to talent will creative ability come into its own. Teaching is opening existing pathways and channels to talent.

The idea of knowledge and how we gain knowledge has changed tremendously through the internet and other digital tools. To continue to teach knowledge within the same guidelines that existed for as little as 15 years ago is difficult, let alone search for a common platform for activity. Information is known, perhaps dated or up to date. It is available, but simply as information, and seldom reaches beyond the informative. Often this information is without limits or contour, and gains credibility or authority through a back-door situation.

It is very important that the task set before the student is on all levels a challenge, and through this the needed information and knowledge will also carry a clear challenge. Here lies the heart of a creative act as teacher. The way in which you write and form the semester program will not

only give a particular result but will also preclude others. From my own experience over the past years, the result of the course depends on how challenging the program is and where the challenge is placed. Most teachers deserve some critique on this point, since the quality of the program is rarely equated to a creative act, rather perceived as a formula or guideline for reaching a specific result.

Further, I have experienced that programs that manage a certain amount of openness and at the same time remain precise in their specific spatial investigation give latitude for student's personal interpretation, or even better, students are encouraged to form an argument that will eventually lead to a personal architectural voice. In a time where "right" or "wrong" in architecture no longer carry the same weight, the student's development and confidence in his or her personal architectural voice is essential.

It is important to create a good atmosphere in the studio, and this again requires a precise and creative stance. Since most work is now computer based and depends less upon a specific work place, the studio must function as a meeting place on all levels. The exchange between teacher /student and student/student has moved away from the drawing board as the center of interest to a multitude of focal points more or less outside of the classroom's domain. A vital part of the learning process are the informal discussions between students, but it is not a given that these conversations will include in depth discussions on architecture outside of the studio. In order for the semester program and teaching staff to reach a certain level of creative dialogue, the studio space itself needs to function as an open forum for architectural dialogue, hence it is important for lectures, critiques and other activities to occur in this space as much as possible.

In the same sense, it is important that the teachers work as a team in the studio, and that they have agreed upon and worked out the program in advance. If the teaching group has thoroughly discussed the program, and how each member of the group can best contribute to the semester far less energy is used in adjusting internal differences. If teachers have different opinions, this is perfectly acceptable and an important element, because the essential focus is the argumentation within the program, and it is this that has set the direction of the course and not a preconceived result or supposition. The variation of meanings expressed by the different teachers is a positive stimulation, since it is part of the investigation process of the program, but it does require respect and teamwork between teachers.

What do we teach?

We teach a basic understanding of architecture, what we believe architecture is, and how to achieve a focus or creative position in order to renew or adjust this understanding in relation to the future. Some of the basic concerns in our approach that continue to be important are a belief in architecture as space, or sequence of spaces, and actuated through physical presence and the earth's gravity.

There is also a belief that architecture has an identity of its own, and that architectural substance lies within the quality of its spatial contribution or in its spatial invitation. Architecture is not just an anticipatory situation, waiting to be occupied, but participatory (even when the space is physically not in use) through its capacity to communicate.

For a course to generate an architectural discussion both students and teachers must understand the creative task facing them, and especially at the start of the course remain receptive to deviation in approach. The task can be addressed from many different levels, social political, cultural, and philosophical in order to broaden the general concept of the task and in finding ways to inspire methods of problem solving. At the same time, we are rather strict in requiring what ever they bring to their discussion is directed towards a 3 dimensional discussion.

Why do we teach what we teach?

In order to have or give energy to an architectural discourse, one must first develop a common base understood by the entire class, and in some way one must accept this base as the start-

ing point for deliberation. From the beginning our discussions are spatial discussions, but other subjects can be brought to this exchange and the definition of "spatial" can be tested. Our goal is to put pressure upon and examine excepted concepts in architecture, and hopefully anticipate future changes.

In a time where the architectural discourse is rather open, and it is difficult to find a single common direction, it is essential to go back and review core concepts and attempt a somewhat deeper understanding of a given problems, not as a researcher, not for the sake of the argument itself, but rather to come into a position to begin a 3-dimensional investigation and to accept architecture's limitations.

Architectural pedagogy is undergoing major adjustments, as is the profession. In a sense teaching has abandoned a number of postulates and pedagogical methods that were effective and little challenged during the last century. Many teachers were educated and began their practices before these changes really took hold. This probably contributes to some of the confusion and uncertainty over what should be retained from earlier methods. I have a strong belief in the capacity of young people to adjust to the demands of the information society. Crammed with facts and information from many levels, they must learn how to apply and sort out this information strategically, and they understand the consequences of their chosen strategy. It is essential that the total learning process in architecture keep this change in mind when choosing a pedagogical approach. To be complacent with the status quo in design pedagogy and to allow information's "authority" to filter into this pedagogy unquestioned is a challenge.

How do we teach in the design course?

I find the studio-based environment both challenging and interesting. It is an environment that seems to give the best results for the student and in keeping the teacher directly engaged with student concerns. A studio that functions well (where energy can be sensed) is a great place to be and a continuous challenge. My studio class is usually between 30-40 students. Almost everything takes place in the studio. All our lectures are given here, as well as outside lecturers on history, theory, structure that relate to the semester project. Other academic requirements during the semester are minimal thus the student is almost totally submerged in the activities connected to the studio. In many ways this situation is a one-to-one relationship between teachers and students, a process, a continuous conversation. The entire class attends critiques three times a semester. This helps to create a forum where students can inspire one another, and forms an awareness of being part of a class. It is a type of teaching that takes a lot of energy. It is time consuming, and requires concentration in order to have a constructive interest in each individual student, but it is also very rewarding.

The computer has forced some adjustments. Obviously the atmosphere changes when each student sits (earphones and all) tied to a computer. Now, when most drawings are computer drawn and only the "result" will reach the public domain of the table, the timing exercised by the teacher towards the student in relation to when to interfere or when to make conversation requires a strong pedagogical awareness.

Why do we choose to teach in this way?

The reason for the studio teaching and the individual approach and guidance in relation to each student is that each has to strive towards an architectural voice of their own. I am not talking about personal "style", but a voice. Not at all, students should work towards an architectural standpoint, a voice from which they can direct a dialogue towards a client, colleague, and others. Without an inner confidence, the student will meet the professional world lacking the necessary tools to understand and avoid dead end situations. To a certain degree, the continuous discussion in the studio prepares the student for the major inundation of opinions, offers, pressure, and the insecurity he or she will face once the formal education is finished. The student must have an architectural voice and develop a creative method to draw the best from a given situation

or problem. I have found no other way or place better than the studio to develop a student's individual method. This is always a pedagogical challenge, since it is individual. The personal architectural voice and method are not separate, but interact. There is a strong relationship between the chosen method/process and the result, and the studio situation is best equipped to analyze and help the student improve his or her method.

What are the exercises and design themes?

As mentioned earlier, to find the proper task becomes a creative act in itself. The programs we offer always call for an architectural search or an architectural argument. Even the title will hint at an area of importance. The program is precise, but at the same time the contour of the result is open. Often students write their own program in relation to a given text, thus they also have to clarify their position to the program text. An architectural program should avoid becoming just a physical answer to a given set of postulates, but rather become a challenge in itself. The student must not use the program and its content as an architectural excuse (the program instructs and therefore limits the student to a given answer), but rather he or she should be responsible for the program.

Why do we suggest these exercises?

The challenge is in some way to direct an architectural discussion towards the future. We must go beyond the idea of problem solving and the completion of a set program, and rather question the questions, the definitions, and functions in architecture. In order for this architectural conversation to occur, the program has to have an architectural argument, a common ground, and at the same time the conversation needs to be inclusive, open. In order to keep this openness, the architectural argument and work in place, concentration, engagement and communication from both the students and the teachers is essential. We work together as a team. This is a challenge, but it offers great results, and is truly an inspiration to experience the studio so full of energy.

How satisfied are we with the design course we teach?

It has been important for me to build up a teaching team. This gives great pleasure, but I am never really satisfied with any of the results, yet I experience joy and satisfaction throughout the semester and also on the final critiques. I can clearly see that young people develop and discover their potential, not only in understanding of their creative process, but as human beings. To be part of this is the gift teaching gives back to you, and it is also this that gives the energy to go on.

Teaching has no clear finished product, no limitations, but at the same time it requires a strong awareness and concentration from the teacher as an engenderer. It is not a hobby or something that you can do on the side. To be a good teacher is an exhausting profession, and it is rather a pity that so little is appreciated, respected, or looked upon as something of importance to the profession.

How could we improve the course?

We could improve the course by being even more precise in forming the architectural focus in relation to the given task. There is also need to find better methods to help keep focus and concentration throughout the semester. If the class loses momentum or focus even for a short period, it is very easy to make short-term compromises that diminish the inherent potential in the given task.

There is always room for more outside inspiration brought into the studio environment such as guest lectures and professionals outside academia.

The course could also be improved by less focus on the final result, and more attention on the result of the process. To have a strong awareness of each step or each level in the process is important for the course as a whole, and here the teacher must also develop the capacity to understand and reveal each of these levels to his or her students.

Final remark:

Teaching is an ongoing adjustment in its strive to communicate.

Team B3: Professor Per Olaf Fjeld, Neven Fuchs-Mikac, Lisbeth Funck, Rolf Gerstlauer

Monitoring Architectural
Design Education
A Critical Reading

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It has been a real privilege to share the process of synthesising the texts gathered to monitor architectural design education across Europe. It was a daunting but illuminating task to read the forty-one contributions and it was immediately clear that many fundamental differences were being demonstrated between the papers in terms of architectural philosophy and position and in educational philosophy and method as well as in those not insignificant pragmatics of funding, staffing and timescale. This critical reading will attempt to articulate a few of those differences as well as identify a few underlying themes.

A structure

The monitoring process has been structured by the beguilingly simple questions to which the editor asked all the contributors to make a response and this reading will also rely for its structure on those questions. However it will, for the most part ignore the issues concerned with the practical management of the teaching and of the students' learning 'What design exercises do I run and why?' and 'How satisfied am I? How could I improve?' These issues are crucial to the running of successful design projects but are often very much shaped by the idiosyncrasies of a particular culture, place and coincidence of staff and students and because of that it is difficult to draw general lessons.

The papers have also been gathered into three categories reflecting three broad phases in architectural education: initiations, articulations and advancements. These categories also serve to structure the monitoring process suggesting a logical progression from initiations to articulations and finally to advancements. An alternative reading is to begin by considering advancements, the end phase of architectural education, to see if there are shared expectations across Europe. All architecture courses also have to deal with the transition into an education based around the design studio and in looking at that process we might see shared assumptions, expectations and methods. The articulation phase then has the function of bridging the gap set by a course's response to the problems of initiation and advancement. We might expect to see a wide variety of starting locations but rather fewer finishing points. Indeed the biggest group of papers, seventeen, were concerned with advancement and this reflection remains, for the most part, focussed on the issues of that final stage.

Urban Architecture and Integrated Architecture

It was possible to see two broad categories within these seventeen papers. There were projects that saw architecture essentially in an urban setting and here the papers described an architecture that was very concerned with its public face and its public space. Those projects were directed towards the response that the architecture should make to its setting and were not concerned with seeing the architecture as some kind of personal expression by the architect. The second kind of project was focussed on an integrated architecture that was engaged with the resolution of the many functional, technical, social and cultural factors that architecture must address. This integrated architecture was as interested in the interior as in the exterior, there was a concern for the role of the detail and there was generally an expectation that the students' personal expression of their own vision would be a part of their architecture. This kind of architecture seemed to be trying to engage with the breadth of architecture as well as deal with the detailed resolution of the pragmatics of practice and raises as a question the extent to which this may ever be possible in a design studio environment.

Questions

In developing the reading using the four remaining questions they can be reduced, in effect to three. How?, What? and Why? The questions that will be the pre-occupation of the reading will be first 'How do I teach?' which subsumes its parallel question 'Why do I teach in this way?'; second will be 'What do I teach?' and finally there will be 'Why do I teach?' with the notion of 'in this

way' somewhat lost in the background. However the questions make an assumption about the focus of architectural education that it is no longer easy to make, namely that education is about teaching. Much of our recent experience as University teachers has been concerned with the efforts of our institutions to focus on the student as the key player in education and to see learning as the fundamental activity. In this sense the questions then become 'How to students learn?', 'What do students learn?' and 'Why do students learn?' The design studio offers a wonderful setting for learning but it has not always been a site that was organised and structured to maximise the opportunities for students to learn in a wide variety of ways by doing, listening and reflecting by themselves, with staff and with fellow students.

Learning and teaching

If we consider the questions within the framework of 'learning and teaching' we can identify at least three issues that emerge from the papers. First, is there a body of knowledge that is transferred from the staff to students? Second, if the primary process is one of learning which is implicitly under the control of the students how to staff control their acquisition of knowledge and understanding? Third, how do students learn to be creative?

Bodies of knowledge

It was clear that both the urban and the integrated architecture approaches could be viewed as having a central concern with the identification and acquisition of a particular body of knowledge although in each of those cases the nature of the body of knowledge was quite different. Some national regulatory bodies, for example in the UK, have attempted to set out a written and articulated version of a body of knowledge which for the Architects Registration Board currently contains over a hundred separate and identifiable fragments at the advancements stage. A body of knowledge in architecture clearly covers both information and know-how. A great attraction both for the teacher and, it might be supposed, for the student, is that a body of knowledge can be structured, organised and coherent. This makes it teachable and if not learnable, certainly memorizable.

If we consider how the transfer of knowledge can occur we can see in the papers a number of different approaches. The body can be dissected and revealed piece by piece without exposing it as a whole. This is how some papers dealt with aesthetic issues in proportion and scale. One or two papers illustrated an attempt to map out the whole framework in the absence of details and examples and then gradually to fill in the detail. Others attempted to explain the body of knowledge by a process of immersion, sometimes in an extreme situation away from the familiar surroundings of the studio, sometimes in an intense studio activity. It becomes clear that the process for the teacher becomes one of deciding on the method by which the body of knowledge will be revealed.

Control of learning

In those papers that described a student oriented learning environment the question raised is how does the teacher control the acquisition of knowledge and understanding? It could be argued, of course, that a wish to control the learning is a wish to undermine the very notion of student centred learning itself. However our Universities have not yet given up examinations so there is an expectation that something valuable will be learnt. It would seem that teachers exercise two forms of control. First they create a pedagogic environment that supports their intentions. They may create a studio based on radical discussion that is tolerant of many different ideas or they may encourage structured discussion, set clear norms for student output and use the crit to control the range of solutions that are explored. The physical organisation of the studio as a setting for learning is also an important tool. In the second kind of control teachers generally set the design tasks that the students will undertake and these normally represent a

structured, organised and coherent set that allow the acquisition of a particular stratum of knowledge and understanding. These tasks are commonly structured from the small and simple, sometimes abstract, in initiations to the large and complex in advancements.

Learning creativity

There was some discussion in the papers about the idea of the student as someone who was expected to be creative. One or two papers, generally from the urban architecture tradition, seemed to suggest that the development of creativity in the student was not what was required. This raises the question of how we distinguish between the 'original' and the 'good'. Several papers seemed to regard creativity as innate and that all that was required was an opportunity for the student to exercise this facility.

How do I teach?

Questions about the creative role of students also raised the issue of whether the personalities of the staff were important in architectural education. There was some discussion in the papers about the extent to which the design style of the teacher was the knowledge to be transmitted or whether the design style of the teacher needed to be concealed from the student in order to allow the student the intellectual space to find their own style (Patestos, p. 316). That discussion seemed to arise in situations where the design studio was a place where a group of students were taught by just one teacher. Other papers described a studio where there were several teachers and here the question that was sometimes discussed was whether the members of that staff team all needed to deal with the same issues in the same way (Lokce & Yesilkaya, p. 221). The management of the staff team, in this reading, becomes a major part of the way in which a course is perceived by students. These questions also raise the issue as to whether studio teaching is, in itself, a creative activity for the staff involved.

What do I teach?

Within the forty-one papers there were clearly many design projects that were teaching about a particular design product - the house, housing, the street - and particularly in the advancements stage were focussed on the representation of a convincing, well-resolved building solution. However, some of the other papers described teaching that was about the process of design itself. Here there were at least three different models of that process that were articulated.

In the first there were projects that assumed that a plan of work for a project consisted of a number of identifiable stages and that students progressed from one stage to the next in an ordered way (see for example Balogh, p. 321). This method might be assumed to mirror the process that is alleged to take place in a professional architectural practice. Designing was described as proceeding from an initial stage where the programme received its definition to a stage in which its formal resolution was achieved and this was then followed by a final stage in which the technical resolution of the building was described. This articulation of designing into clearly defined packages both structures the teaching process and suggests the way in which design proceeds in practice.

The second model of the design process assumes that design in professional practice is almost always carried out in a team and that, therefore, the design studio should operate on a team basis (see for example Yegenoglu, p. 239). This work, clearly focussed in the 'real world', also often involves an engagement with builders, planners, community groups and city officials. Design is projected as the resolution of conflicting demands and needs and the designer is characterised as an arbitrator.

The third model, in almost direct opposition to the second, sees design as a reflective process in which the designer is in a 'private dialogue with oneself' (Domenico, p. 303). In this model creating the mental and physical conditions in which this dialogue can occur becomes a key ele-

ment in constructing a design project and organising a design studio. In this model architecture is seen primarily as the revelation of a poetic truth.

Drawing

Each of these models also makes very different demands on a student's representational skills and places drawing and three dimensional model making in different relationships to the design process itself. Where design is seen as a staged process the project needs drawings and models at the end of each stage that summarise the work executed in that stage. They are formal, unambiguous and complete. In a project concerned with team work drawings and models need to be primarily concerned with communication between the members of the team and have to be targeted at the recipient's skills and preoccupations rather than those of the maker. These drawings need to be clear, targeted and unambiguous. Where a poetic revelation is the key design objective the drawings need to be personal, rich, intuitive and may well be informal, ambiguous and incomplete. Providing students with the opportunity to develop the representational skills that a particular design process requires, in this reading, also becomes a key way in which a course defines itself. Students will not develop rich, intuitive drawing skills in a team work environment and so cannot easily transfer from one process model to another and in this way a course's representational mode will define the design processes that it teaches.

Design studio is not design practice

In the final stages of most architecture courses the demands of the projects attempt to closely match the demands of a project in an architect's professional practice. But the design studio is not an architectural practice, so what is it? I remain convinced that the real requirement in an architectural course is to equip students to operate in architectural practice with integrity: that is to remain creative in the face of the pragmatics of practice. There is a natural logic, therefore, in supposing that it is essential that the design studio in the advancement phase simulates, as best it can, the pragmatics of planning, building codes, environmental performance, structural efficiency, cost and constructional discipline. However, Kucina suggested that there could be a kind of 'teaching and learning that is closer to sport training than to academic examination' (Kucina, p. 340). Such an idea addresses directly the issue that the studio, like sport training, is not the event itself but that performance in the event, in practice, is crucially dependent on the quality of the training. It may well be that an architectural course does not need to simulate closely the process of design in practice but may instead need to develop the range of skills, the attitudes and the rigour needed to function successfully in practice.

Why do I teach?

This question for the authors of the papers was very personal and it remains so in providing a reading of them. The design studio is a very demanding environment that calls upon my reserves of concentration, energy and enthusiasm. I share with the students the requirement to observe, to look, to see and to reflect. It is also an environment that is richly rewarding because what happens within it is unexpected, creative and challenging. It is the environment in which I learn.

This reading has not attempted to draw many conclusions or to wrap issues up into tidy bundles. The art of studio design teaching does not allow it. The forty-one papers are a testimony to the nature of the design studio, a snapshot of its diversity and an indication of its continuing development.

Chapter 2

Debate

Chaired by

Jean François Mabardi,
Louvain-la-Neuve, BELGIUM

Tom Jefferies, Manchester, UNITED KINGDOM

The question is: In the light of the underlying criteria by RIBA, in Britain, does it actually matter at all what has happened in schools of architecture?

David Willey, Plymouth, UK

It is quite easy to answer, in a way, because the 109 criteria do not matter at all. It is a real pain as teachers to have to demonstrate all the time that our students know all that information, which clearly is not the case. So, constructing that particular myth for the RIBA is time consuming and annoying, and, in terms of the student, it is not crucial at all because you are not teaching that level of information. A lot of what they are concerned about or what they are expecting the professional architect to do is very routine knowledge. For instance, they expect them to know what the fire regulations are and it just happens that, sometimes, we have students who have not learned them, which can be a bit of a calamity, but it is partly because we or they may not have focused on that as it is not, necessarily, the most important thing.

I think that some of these meta-level skills that people have been talking about, such as how to understand your own design process, personally, I would articulate as, *what are the questions about architecture that intrigue you as a final year student? What is it about architecture which is difficult and intriguing? What are the questions that are going to consume your professional life?* A school should be able to equip students with the necessary skills to be able to tackle these issues. Personally, I do not believe in answers, but only in questions because answers are transient whereas questions, though not eternal, do tend to stay with us for some time. Also, answers are never constant, subjected to afterthoughts and reflections.

It seems to me that we should equip students with the awareness that what they are doing is dealing with a set of questions that are in some way embedded in the discipline. These questions deal with issues such as: *how does a building belong? How do we decide what is appropriate in terms of what we knock down or put up?* So whatever we do, these are the questions we need to deal with because they belong with architecture, and how we set about answering these questions is the pursuit of a lifetime. Also, you can never be sure that you have actually answered these questions, but you do know that those types of questions absorb you. For example, I am absorbed by windows and want to know why that particular window was put there. I know that I can always deal with this question if I want to design as an architect because windows are always with us, and though the making of a window may not be clear to me, I know that it is a very interesting question. I think, in the end, through their education, students choose what they want to be absorbed by. It seems to me that this is what we are actually doing.

However, it so happens that other people do not share this view, and that is the hidden agenda among us, that is, that we all have a sense of what we think we are teaching, ultimately, but there is no common agreement to that. In fact, I doubt if there are more than 2 or 3 people here who I can agree with me regarding the choice of questions I want to work with. Other people want to articulate what they think, and the outcome of their teaching is in a way different from mine. Nevertheless, we can assume that it is not the 109 identifiable criteria that are expected from the architecture department, but it would have to be something else and at the meta level. Articulating all that is also one of the problems we face both with our students and with professional groups, which, in my opinion, did not come out of the papers.

Christian Huetz, Regensburg, GERMANY

Somebody pointed out the role of the school and influence on students. If we assume that the role of the student is to learn, then our job is to get the students thinking about the right approaches to achieve this. Moreover, it should not be done strictly according to the teacher's beliefs, but should also follow their own beliefs. This is very important. To add to another point mentioned earlier, it is natural that students will make mistakes, but mistakes should be perceived as a means of learning.

Per Olaf Fjeld, Oslo, NORWAY

Perhaps, there has been some misinterpretation of what was meant by the term "beliefs". What I meant when I said that the school should have a certain belief is that it needs to be strong enough for it to have its own base, meaning that the school has the capacity to put forth whatever type of architectural argument the school wants to promote. Therefore, the meaning, here, is quite different from the notion of beliefs as a set of principles we transmit to students. Finally, that belief formerly referred to represents a base from which a discussion can start, and without that base from which to work, the argument that can be put forward for discussion will lose ground.

Loughlin Kealy, Dublin, IRELAND

There is a question I would like to add to the discussion, and it is partly about "belief". I wish to emphasize the importance of not abandoning the idea of belief. If I can just draw from a perspective of my own country: it has extraordinary difficulty at the moment in managing its environment, in addressing intelligently the future of settlements, in managing its own landscape, and so on. There are many young people who want to be involved actively in that process (of environmental management), and what has animated us in their development of education, is the desire to make that happen, and to look into issues in a way that enables people to acquire skills and engage in the process - in the full awareness that they are also engaged in something that has a long cultural history, which continues long after their deaths, so that they are not disembodied entities floating in the universe. It is essential that students believe that they can make a difference through their actions.

So, I do not have a whole lot of sympathy for the "affordance" opened up by the availability of digital media, per se, because it seems to me that capacity immediately puts back in, the question of underlying values: *what do you want to use this for? Why is it important?* These questions go parallel to the ones David put forward. Therefore, I do not think that architecture exists as a purely intellectual discipline. It is integrally bound up with the materiality of the world.

Now. If I can go back again and look at how programs were presented, there was a whole collection of areas that we (readers) knew nothing about. For example, with regard to some architecture programs, I found it interesting to realise that areas of work were not professionally orientated in the same way. I did find the discussion on the search for commonality on the whole missed out on that kind of difference - situations where profession and academia are closely entwined and where they are not: situations where you can start to make constructions immediately you are qualified - against that, in the UK there are extra requirements that have to be met - and for us several institutions have requirements that have to be met. At the end of the day, what the teacher needs to do, it seems to me, is to prepare students for work in the practice of architecture, no matter what the institutions, conditions or circumstances may be - there might be a risk of detaching oneself from the centre ground: thinking that what is crucial in architectural education is that there is no clear pattern - that is what emerges from this book that we are discussing.

Josep Muntanola, Barcelona, SPAIN

One thing that I found intriguing from the proposal is on re-focusing on the creativity that is lacking from the book. When we think of creativity the way it is perceived nowadays we only think of either massification of individual creativity. But students do not have the opposition of making the rules of massification or the way they want to be autonomous with a kind of inside social reciprocity, not any kind of social reciprocity. They check all the time autonomy and social reciprocity but they acknowledge situations that for us were very difficult. They do it faster and this new creativity is very important and we can help them this way. It is both wrong to say that we will dictate the behaviour to them but we have nothing to say nothing to them such as that no reciprocity is good. I have collaboration with doctors in Spain that deal with pathologically ill children with distortions of space and time and they ask the doctor when a problem with a child is solved.

How do you think the cure has come? One thing that can prove that is that the child is more autonomous. Another way is that the child is not suffering any more.

I would like to make another point about computers. There is undoubtedly a new tool and a new possibility good for survival, but I remember a reaction from Plato that said that with writing we will stop thinking and talking. I think, similarly that the drawing should not disappear; we can still write, think and talk. I think we should not eliminate drawing with any mystification of computers, drawing or writing. The more the skills the better. We can combine computers and all other skills with creativity and that will depend on the use of the tool.

Simon Beeson, Edinburgh, UNITED KINGDOM

I was one of the contributors of the book. We were asked to write about ourselves, which was one of the interesting things about it as an exercise, and it raises some interesting questions about why we are here.

I have a friend who recently published a book based on a series of workshops he did around schools where he asked children for questions. One of the questions a child came up with was "Are there more questions or answers?" I guess that is a good question.

There are some questions that were not asked for in the book. One is whether there are problems in the profession that architectural education can solve. Are there problems in the profession? From the perspective of architectural education, do we see a problem? What is the relationship between the education and professional accreditation? I think that varies from country to country, but it is becoming more and more important.

There is a quote from Charles Eames which I find very useful. He was once in a forum presenting some of his ideas, and, at the end, one of the students asked him, "Why do you do so little architecture?" and his response was, "Everything I do is architecture. I just don't make many buildings." (NB. Interestingly Ray Eames also remarked that she never gave up painting but changed her palette).

I think that one of the problems we have in trying to find a common ground is identifying what exactly "doing architecture" is for Eames, whether designing his chairs, drawing, building or designing an exhibition.

This was touched on by an earlier statement which said that a project is meant as an architectural argument. Of course, we know what arguments are, but we do not seem to be able to state very clearly what an *architectural argument* is, even though we use the term over and over. We can find a common ground in using the word *architecture* or *architectural education*, but we are loathed to define what "architecture" is. Even if we were to talk about creativity, *architectural creativity* would be different. It seems to me, that Charles Eames states that there is a particular way of looking at situations or creative issues from an architectural point of view. If there is an unspoken skill, we assume that it is not essential that we articulate it in the profession, because there is nothing seriously wrong with the profession, because with the rise of pluralism there are different kinds of architecture. I suppose it is not because we want to solve any problems with the architectural profession, but because we want to articulate it within our teaching.

In reading the "Initiations" section of the book, there is some agreement in level 1, where we are less confused about what architecture is. I think we realise that the product of architecture is a building around which we focus various issues and that we have no problem getting students to make small houses and buildings and discuss these possible issues. What is strange is that at the end of the course, there is disagreement about what architecture involves.

Finally, I would like to say that one reason why we need to articulate what we do is not because it is a problem with architecture as such, but because we have something to offer, and I do think that architectural education is a wonderful foundation for a great deal of other activity in our culture. In this case there are other issues such as how to design the curriculum base of the architecture degree at the undergraduate level. If we knew better what we did, then we would be able to offer it to a wider audience. We could actually identify how to apply a particular way of

thinking. We are at the moment very unclear about what we do and we ought to make an effort to make ourselves clearer.

Per Olaf Fjeld, Oslo NORWAY

I agree with you and, like others, believe that architecture has a design which is not at all static, and in order for the school of architecture to bring that forward, if they do take on the task, the more precise we are in the articulation of our research in the beginning statement, so that we have an awareness of the driving force behind the research, irrespective of the outcome, that precision in the initial phase will direct that energy in a certain way, allowing us to understand whatever we can derive from it. If not, I think we may be cruising down the same level, which is mainly what we do.

Ali Uyanik, Aarhus, DENMARK

Regarding what was mentioned about innovation, and creativity, somehow, I prefer to use innovation. Since creativity is sometimes misunderstood. Innovation in my mind includes not only falling on an idea but understanding, choice, elimination, construction of an idea in to a work of architecture. For a long time I thought Leonardo was a very talented person, that he could create works of art just by doing it. Then I found a large number of entries in his notes précising how to paint sun down. This was a revelation to me. He was not only gifted but can deliver his geni because he knew how to construct. That is why I say the use of word innovation is better.

Then the word rare was mentioned I would rather speak of quality, meaningful, because I do not think that in the times we live in, also with so many architects at work every piece of an architect produces should or can be rare. It should be rather be of quality and usually quality of the common.

The effect of the teaching staff's personal architectural standing was put to question. Having teaching faculty with clear positions on architecture will help to create an atmosphere where students can flourish. It seems to me that this is probably the most important thing we can do for students.

Cesare Macchi Cassia, Milano, ITALY

I had a point to make following David Willey's very interesting speech. He introduced a third question to the problems discussed in the research in the book on architectural design education, "What and how we teach" and a very important question, "Why we teach". It is easier for our students to respond to the question of "Why they are learning architecture" because today our students can see and think about architecture from the start. I think that responding to this question is necessary in order to have the opportunity to discuss architecture education. What is important for us to discuss together is the sense of architecture today in our societies and the way to teach it, but it is impossible to teach without clarifying what the role of architecture can be. I believe it is primarily an ethical problem followed by a cultural one. Also, since we are no longer in the 30s we must have an idea on why before what and how.

Per Olaf Fjeld, Oslo NORWAY

Just in passing, it is interesting that neither Nouvel nor Gehry were mentioned anywhere in the papers whereas Christopher Alexander quite a lot.

Patrick Flynn, Dublin, IRELAND

I think as educators we seek to promote relational knowledge. Relational knowledge is where knowledge is related back to something the student has already experienced. I think one of the talks referred in a provocative way to the students knowing nothing. This, I believe, is not true. The students already know a huge amount about architecture even when they arrive the first day of

college. You may have a student who has come from farming background say for example and your role as a tutor is to allow the student to see the architecture in the way the fields are transformed by the action of the farmer.

As tutors we deal in the exchange of what we believe with what the student believes and this interchange of ideas produces new knowledge.

Chapter 3

Readings by

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Constantin Spiridonidis

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Ideas and Reflections on Urban Design Education

Cesare Macchi Cassia
Polytechnic of Milano Bovisa,
Second Faculty of Architecture,
Milan, ITALY

Those of you who read the introduction by Constantin Spiridonidis to this book will have realized that there was no need to bring to your attention the implications of the research on Urban Design education, for they are fully examined in Constantin's text.

Nonetheless, I will therefore try to complement what Constantin has already written, and add something from a different perspective.

Any text is read in the light of one's personal positions. Apart from that, there could only be an a critical perception of contents. By the way, in the discussion following this introduction we will have the chance to hear from additional voices expressing even more opinions than those found in the book. So, I believe it is useful to present my comments as broadly as possible, taking inputs from the opinions expressed in these pages, but also in light of my experience as designer and teacher.

The topics I will touch on are:

- urban design and the contemporary city
- fragmentation and unitary design
- autonomy of urban design
- the project as comprehension tool
- urban design and composition attitude
- history and background
- towards a territorial architecture

Urban design and the contemporary city

To interpret the ways in which urban design is taught, I believe it necessary *to consider the meaning of urban design in the contemporary society, economy and culture.*

In reading this book it becomes clear that *there is a correlation between the specificity of European regions and the vision of this educational subject within the Architecture academic curriculum.* It isn't just cultural traditions and development levels to have a reflection on schools; rather, it is two further issues.

The first concerns the role given to urban design, in relationship with the level of understanding achieved as regards to the characteristics of the contemporary city.

The second issue pertains to the perception of the roles that can be played by urban design in relationship with architectural design -the mother of all projects- in offering a contribution to the contemporary society. A society that, now more than ever, seems to be able to self-design its own living environments, creating them from single buildings and spaces more than from a unitary design, starting from the spaces of private comfort rather than from those of public comfort: the collective spaces.

I believe that, beyond single parts and words, the reading of this book leads to a general conclusion: in order to have useful discussions on the 'whats' and 'hows' of teaching urban design, *it is necessary to reflect on its specificity in respect to other types of physical projects. And, even more importantly, what its utility for the urban society, that is the entirety of the contemporary European society.* Considering the issues that today arise from defining the living environment of this society.

The same difficulties of the urban project in the contemporary territories encountered in teaching urban design? And, especially, what is the relationship between the two elements, as mediated by us, not only as teachers but also as designers and researchers?

The Urban Design Course at Portsmouth's School of Architecture emphasizes "the urban condition of contemporary society", affirms that "the city as a recognizable entity becomes harder to define and impose limits on", and highlights themes such as "the nature of the urban and sub-urban landscape, aspects of urban living, urban density and mix."

The Landscape Channel of Manchester School of Architecture defines its field of study and work as: "the contemporary city's peripheral space. This is a space that falls outside culturally understood readings of urban character. Paradoxically it is the space that characterizes large areas of the contemporary city. Terms for its description are usually negative and/or pejorative. We seek to describe the conditions of this space, developing methods of documenting and mapping it."

There are other courses, here, where the need to renew the methods for teaching urban design -as a consequence of the dramatic diversity of the contemporary city as compared to the modern city- is not recognized. Consequently, there is a lack of *understanding of the huge potentials of the projectual, compositional, and linguistic expression contained in the cultural aspects of new urban dimension*. These courses are well-done, comprehensive, and complex. Yet, today, they may lack utility.

It is now necessary to note that by *contemporary city we should mean the entire city, as the contemporary aspect is inherent to the way it is utilized, and therefore it lies more on the substance than on the form*. The existing city, that is, the historic and modern parts of European cities, maintains its specific forms, but adapts them to new meanings and applications with a level of intensity never before seen. We face not as much a new physical dimension, but rather a new cultural dimension of the city; thus the project is offered new potentialities.

The Urban Design Course of Portsmouth notes that "... urban is therefore so by way of its cultural characteristics rather than its location..." To which I would add, rather than its physical dimension.

Fragmentation and unitary design

As designers and teachers, we have to deal with a city that is so different as to require a new name: I call it "urban territory". A place that sums up the absolute of the historic city, the unitary continuity of the consolidated city, the diversity per part of modern city projects, and the elementary factor of contemporary dispersion. A place where we witness the wide spread of a similar lifestyle: that which is established by the contemporary side of the city, confirming the importance of the conditions embodied by it.

In 1966, talking about Milan, Aldo Rossi wrote: "... this is one of the most negative ways to interpret the city-region: thinking of simply enlarging the field to solve, in a wider area, the same unsolved problems of a smaller area.... I believe, rather, that the city is a power in and of itself, and that today, more than ever, its greater dimension represents the chance to identify a higher level of quality in urban history, capable of *bringing into a broader dimension the civil progress and the specific quality that are connected to the origin and the development of the urban fact*."

Thus we face a problem which we may later discuss. If urban design accepts its function of being applicable to the various aspects of contemporaneity, it then must be able to present proposals suitable to the renewed cultural dimension of the city. In my view, it essentially translates into this: being able to offer scenarios that can take fragmentation as a primary aspect of the contemporary fact, and see this characteristic as an asset of an all-inclusive dimension, and thus of a unitary design, whose expressive value is coherent with assumptions and needs alike. A design which is both firm and mutable, always dynamic, and able to inspire further new proposals.

The study programs of Barcelona's School of Architecture of the Vallès have the following pedagogical objectives: "The urban project as an immediate response, unique and flexible to the conditions of a site and a program that could change its demands in time.... The necessity of flexibility to respond to the complexity of actual processes of city expansion in which there are many agents and where demands can change rapidly from the initial assumptions."

Autonomy of urban design

I believe the discussion may now more easily delve into the two themes I anticipated at the beginning of my speech. They are the value of urban design for today's European society, and the rela-

tionship with the methods of teaching.

Lacking sufficient awareness of the processes and the forms of construction of the contemporary city, what level of complexity can urban design assimilate -reaching a qualitative synthesis which can only be morphological- to achieve specificity with regard to architectural design? *For the specificity and the utility of urban design reside in the capacity to understand complexity, and use it within the physical proposal.*

According to the School of Architecture of Stockholm "The theme ... is complexity..."

The Department of Architecture of the Middle East Technical University of Ankara states that "In recent years we have particularly focused on techniques that yield to field, ground, mat or surface organizations, or matrices, which render the boundaries between the traditional fields of architecture, urbanism, landscape architecture and infrastructural engineering more flexible..."

The Faculty of Architecture of Belgrade adds that "...we do not consider urban space only as a physical frame."

But let's talk about teaching: how much autonomy does the urban design suppose to obtain from within the disciplines of physical proposals? What originates, *how positively motivated is this claim for autonomy from the teaching of architectural design?*

I believe the task of urban design today should be that of unveiling, that its duty should essentially be of grasping the greatest potentialities of ongoing processes.

There is a latent city in the contemporary urban territories, that awaits the right chance to show itself. Only the urban design, with its interlinking interests, may understand this reality and cause it to surface. This is a deeply renewed role compared to other intervention instances. Today it is necessary to recognize the reasons at the root of the processes of growth, in order to build scenarios partly varying from the forms envisioned by society for the affirmation of those processes in the territory.

According to the Landscape Channel of Manchester School "... Issues of revealing and understanding process are fundamental to our work. Through understanding process strategies can be developed that engage with city form at a primary level".

But attention to this role of urban design seems to characterize only part of the academic curricula presented here, while the reality of most European regions seems to call for it.

The project as comprehension tool

And now, we have come to an important point in our discussion.

We are able to appreciate a particular reality only if we think we may intervene in its modification. The tool we use is the physical project. This means that only through a projectual approach to a given problem can we hope to understand the context that surrounds it. *There can not be a separation between interpretation and project.*

All courses presented in the book are positively based on the project. They are projectual workshops. But some programs maintain the moment of analysis as propedeutic to the moment of proposal. Only a small minority theorizes -quite accurately, in my point of view- on the need for the two moments to coincide.

According to Barcelona's School of Architecture, "It is important to insist on the unity of analysis and proposal... *It is only confronted with an incipient idea for a project that the checking of a given reality: site, program, precedents, etc. becomes fully useful for the design process.*"

Furthermore, we know that it is much more difficult to express a projectual vision of the contemporary city, than it was to do so with the modern. Consequently, the contemporary city is much more difficult to comprehend. Vittorio Gregotti spoke about "the aesthetics of ascertainment", a vision limited to the geographic description of mutation processes, without expressing any judgment on the project brought about by society, without our contribution.

But if we are not able to express a projectual position, we shall equally be unable to understand

the needs of that same society.

Looking beyond the research we are discussing today, it is important to note that there aren't many Architecture schools in Europe whose curricula are in tune with students who see the contemporary city and its entirely innovative characteristics as their own every-day living environment. The best among them travel across borders seeking courses that can talk about that reality, and the ways to approach its understanding through the project. This, of course, applies also to the schools which are represented in this book.

The Urban Design course at Antwerp Higher Institute "starts from the premise that the architecture student shall first become acquainted with the contemporary approach to urban development ... Urban Design is described in the course curriculum as a social discipline that takes as its core subject the spatial development of the site..."

Yet, for some courses, the very projects selected to illustrate in this book the results achieved denounce, through their form, a sharp separation from the contemporary cultural dimension. This draws attention to the theme of projectual capacity in the physical dimension, or in other words, to composition capacity, and how it is learned in the school.

Urban design and composition attitude

A typically educational theme confronted by research is that of placing urban design teaching in the study course. What lies behind this issue is the attention of the faculty towards the projectual and composition skills that students must attain before they are able to approach a course on urban design, usually placed in the third year.

In my view, this is not only a false problem, but it also reveals a lack of enthusiasm in recognizing the role of urban design within the teaching of architecture. Does urban design represent the opportunity of teaching composition?

Learning composition from the themes of urban design, and thus from the variety of scales, the use of the form at all levels - structural, typological, stylistic - means talking about Architecture in the most correct and useful way. It means taking Architecture back to its role of builder of the city.

To fully develop its potentials and affirm its uniqueness, and even more to put forward its utility, *courses on urban design must develop composition capacity. Using the form at all scales*, focusing particularly on the broad scale characterizing the contemporary city. Even the choices of expressive language can be perfectly grasped in a wide-area project. To do so, teaching staffs must consist of composition experts aware of the new territorial dimension, researchers with interests in compositional urbanism as well as in territorial architecture. Inside the same person.

Many of the programs in this book reveal a strong interest in the themes of morphology. Few are those who recognize that it is important to help students develop the competence that will make them suitable to understand the themes of morphology from the point of view of design. In other words, the composition competency.

The Department of Architecture at the Modern University of Setubal in Portugal affirms that "...the teaching of Urban Design in association with the study of Urban Architecture must be based on the exercise of Composition on a level of high abstraction..."

The School of Architecture at the Second University of Naples lists "...the composition of the town architecture" as a level of reference for urban design".

Composition attitude is characterized by an in-depth investigation on projectual layers overlapping, and scales intersection. It can thus exploit the absence of hierarchies that dictate the relationship between moments and means, decisions and players of the construction of the contemporary landscape. *This absence of propaedeutics removes from the theme of scales the structural significance that characterized it and separated it from other themes: the relationship between plan and project, between zenithal and three-dimensional vision, between a-spatial decisions and physical choice: Between Urbanism and Architecture.*

History and background

In the introduction chapter of this book, Spiridonidis notes that urban design constitutes one of the fundamental didactic areas in European architecture schools. In teaching hours, it ranks fourth, right after architectural design, building techniques, history. But Costa adds a much more interesting consideration: this incidence is greater in the bigger (and, I would add, older), public schools than in the independent and often private schools. And it is greater in the south and the east than in the north and west of the continent.

What is the reason for this tendency? I think it is found in the reflection of the reality which is external to the academic world. In a more dynamic and culturally aware socio-economic environment, urban design is absorbed by a reawakening of the classical view of Architecture as builder of the city. Even through distorted means, such as the mediatic success of architectures conceived as monuments, or architecture used as a tool of urban marketing.

The Urban Design Course of Portsmouth "...has sought to characterize aspects of its curriculum with debate concerning the relationship between Architecture and the City."

The School of Architecture of Naples poses as primary themes "...the town as fundamental of the study of architecture."

In reality, urban design is Architecture's tradition. Due to this tradition the purpose of Architecture is to build the city, allowing the fulfillment of *the project's supreme objective: allow the inhabitants to renew their capacity to recognize themselves in the urban forms.* Italo Calvino wrote: "happy the cities that continue to offer their form to the wishes of the citizens." In account of this tradition, history and background understanding are the fundamental tools of the project.

Through every projectual age, contemporarity has found a connection with the existing environment, giving it renewed meaning. The transformation deriving from the projectual interpretation, changing in part the characteristics of the physical context, guarantees permanence to its values. Among other things, this is the only correct way to intend conservation.

It has always been so, beyond scales or density figures. How that can be applied to the present day, throughout the contemporary urban territories -where the city has migrated- and also to the years of misuse of urban architecture, is now a key issue. I believe it is just when the architectural project reaffirms today its role of builder of the city, that these very objectives enter an easy, yet misguided path. The result, in opposition to what is claimed, is an architecture essentially parasite of the city. An architecture that demands the legitimating of its value within a context that it does not feel the need to understand, and to which it refuses to contribute.

Towards a territorial architecture

In this context we can see urban design as the city's architecture, and its teaching as a fundamental phase of learning architecture tout-court.

As the city has turned into urban territory, *urban design is given its real, present task: proposing itself as a territorial architecture.* This role, that of building the territory as an architectural act, cannot be managed by architectural design. This role is inescapably bound to the projectual use of many potentials, whether they be morphological or environmental, country-tied or geographical.

The transformation of the city into urban territory leads us to growth processes where the project has renewed potentials of representation. Yet something is still missing for this to actually come about, and release into the contemporary city's economy the results that come from being comprehensible, recognizable, and able to represent the quality of its constructors.

I believe that what is missing, what is necessary, is *an idea of a city that can be applied jointly with urban materials and context. To plan an all-encompassing landscape, which quality may be shown through parts, sections, modest concentrations, and relationships that can design the continuity of the city.* An aware landscape that may constitute an asset for all to share.

This objective can pertain only to urban design, and our courses must prepare future operators for this task. *This will enable urban design to be conceived as the urban plan which the contemporary city so dramatically needs.* A plan that may stand apart from the traditional master plan as well as from landscape planning, which today is considered as a step forward, beyond Urbanism and Architecture alike.

Re-thinking the construction of the contemporary city from Architecture's point of view means analyzing the relationship between the autonomy of Architecture and reality of urban construction: a partial autonomy, whose boundaries are all the more faded in considering the structural complexity of present-day reality. Yet, this autonomy is originated by the highly specific and strongly recognizable connotation that our field of study has in Society. *The task of Architecture concerns the meanings of the urban fact affirmed through form, and this constitutes an absolute value.*

The spatial dimension of the contemporary city, and the temporal and managerial dimension of its construction have not only stressed the theme of permanence and flexibility -as some courses highlight- but they have also emphasized the ways of the relationship between abstraction and concreteness, between theory and realization.

In the urban territory, the geographic dimension is intertwined, with no degrees or hierarchy, with the buildings' dimension. We must therefore reflect on the meaning of large objects and minute repetitions, and do so through the use of the form. *Architecture's tools are not discarded as they operate through the broad scale,* making the use of the form much more complex.

I believe it is these themes and objectives that urban design, and the teaching thereof, must focus more keenly on, for it is here that urban design's cultural and civil utility can be found.

The programs of the School of Architecture of Barcelona talk about "...total architecture...", and "...architecture of the whole."

It's certainly necessary to be aware that the most interesting projectual attempts, in this field, are today originated from practice, from work opportunities, rather than from academic research.

According to Ankara's Gazi University Department of Architecture, "Urban projects, of which urban design is an integral part, have constituted the most intriguing design products in the world during the last two decades."

These endeavors in return stimulate the cultural value of the profession, and contribute to a renewal of the social recognizability of Architecture. The work proceeds through the awareness that the project and its realization are today much more the result of a combined effort, and that this has been obtained through processes that we can only call positive. They include the remarkable broadening of the ability to affect the configurations of one's own living space, an ability which comes from the cultural and productive mass affirmations achieved in the century we have just left behind.

Some courses self-present themselves through this book clearly affirming this knowledge and level of awareness. Their programs indicate the right way to follow: pay close attention to our clients and show them alternative scenarios. This is today more an ethical than a cultural need.

We may not escape the undertaking of making history again, believing we must and are able to change it, rather than merely harvest, or narrate history. Hence, we feel the need to make new proposals, to move forward, to offer forms that enable us to understand and to change. *Forms that carry on reality.*

Reading Teaching Cultures in Urban Design Education

Constantin Spiridonidis
Aristotle University of Thessaloniki,
School of Architecture,
Thessaloniki, GREECE

How could a book of this nature be read?

I would like to start saying that I have been working at becoming a better teacher since 1992 and that my teaching knowledge has accumulated on the basis of failures. Perhaps, I could describe my career as a series of failures, which has amounted to knowledge, and I am still on the road of trying to become a better teacher. This is the whole purpose, after all, of this initiative, which for me is to gain better insights into the teaching process. So, this is the personal story and underlying motive behind the initiative to organise this event and to publish the volumes on which this workshop is based. I should add that with this presentation I would like to share with you a series of thoughts that occurred to me in the process of collecting the various texts, organizing the books and presenting them.

First and foremost, I will start with an ethical question, which I consider to be very important: *how should a book of this nature be read?* Since there is not only one answer to that question, I want to present you my own view. I did not read it in an effort to side or agree / disagree with one text or another or even to find groupings I could say I communicated with and others not. So, I did not read with a judgmental attitude of good / bad, correct/wrong, or with what was compatible / incompatible with my value system. On the contrary, the way I read the book could be described through the following metaphor.

A few weeks ago, I downloaded, from the internet 20 different versions of the song called "Fly Me to the Moon" and I recorded a CD with them. There was such variety that we would enjoy listening to each version separately in its own right, its own distinct quality and particularity, without the tendency to pass judgment. With each variation, ranging from jazz to disco, blues to original sound track, etc, you knew that it was the same song, but in the end, you got a different feeling or pleasure from each. This is what I experienced when I read the book, where the texts seemed to be different versions of the same "song" expressed in totally different ways, with different values and words, just like the song whose lyrics were not always the same. So, the variations set each text apart with each representing a different world. It seems that we live in a period of time where differences count more than similarities, and the way to proceed from now on is to invent ways of dealing with this new situation not via contradiction and polemics, but with a renewed spirit of cooperation, allowing us to continue our "Babel" dialogues in order to protect them, keep them alive and give them eventually a creative perspective.

Which is the world we want to teach?

I wish now to draw your attention to the reading focus emerged by the above mentioned attitude in the process of going through the material. I want to start with a rather evident (hypo)thesis: *there is no project without an object*. Whenever we design or run a project, we have an object in mind. So, an issue that I wanted to look at in terms of the texts was: *how was the object perceived / conceived?* The second (hypo)thesis is that there is no project without a subject, so, I wondered while reading: *what is the conception of the subject in the teaching approaches of the book?* The third hypothesis is that *there is no project without trajectory*, meaning that there is always a process through which a subject looks for an object. So, I was looking for the *proposed process in the teaching approaches of the book*. The fourth hypothesis is that *there is no project without a reject* because in an effort to create a better object, the subject needs to go through a selection process which always rejects options belonging to or reflecting an already manifested or established value system. Last but not least, *there is no project, without "surjet"* (overcasting / topping) as Jean-Pierre Boutinet¹ so sharply indicates.

The focus of my reading then centered on these five parameters, which I will now discuss in more detail. As far as, **the object** is concerned, we know that **the city** as architecture always escapes its definition every time a new definition appears and a new effort to approach this object is made as part of a continual process of rejecting and redefining. What was interesting in my reading was that the city as revealed through the different texts does not, certainly, have its own circumscription, that is, perception or conception. We can find a spectrum of perceptions, starting

from that of the city as a system or structure, as well as the understanding of the city and its architecture as a social condition, whereas there are cases where the city is a cultural condition. Therefore, from the structural to the social and political versions of the object and with the dominance of its cultural dimension, there are at least four different conceptions / perceptions of the city and, implicitly, architecture that could be found in the texts.

Regarding **the subject**, since the teaching of architectural or urban design addresses those who become designers, the conception of *the designer* is relevant, and it is interesting to find that there is no common definition of what a designer is. Again, we can find different versions or approaches to the understanding of the designer. For example, the role of the *problem solver* emerges from the pages of those who talked about the design process as a problem-solving activity, demanding training in the respective skills. Another personality evolving from other texts is that of the designer as a *social regulator*, intervening in a given space and exerting social influence, thus the role, here, is not just that of the problem solver, but social intervener as well. An additional figure characterized by some is that of the *cultural interpreter* of a place, whose role is slightly different from those previously mentioned. Finally, there is little evidence, actually, only one or two cases that hint at the urban designer as a creative artist, making an artistic intervention in a space. Therefore, there is an interesting variety in the understanding of the **object**, as **city** and the **subject**, as **architect**, **designer** or **intervener**.

Almost all of the texts deal with a design **process** that is approached and influenced by the various perceptions previously mentioned. For example, in the description of the exercises, some texts say that students are asked to *analyze* the urban space whereas in other texts, teachers ask students to *understand* the space while others speak of feeling the space or even of reading the space, all suggesting a different approach to the way the design process is to be perceived and realized. Strangely enough, those that propose analysis are in fact, considering the city as a structure or system, thus looking to the urban designer as a problem solver. Moreover, those teachers that call for an *understanding* of urban space present the city as a social and cultural phenomenon and think of the designer as a social or cultural regulator. In contrast, those who propose "*a reading*" of the city as it appears before us, today, consider the city as a meaningful cultural artifact, reflecting or expressing a place or society, thus, the designer is seen as one who interprets these meanings.

If we move on to the aspect of rejection, what we will find is very similar to what Cesare Macchi Cassia said previously, which is that there is a kind of "**antithesis**" toward Modernism, which actually nourishes the thinking and activity of new designers, at least that is what Modernism claims to do. Modernism is often subjected to a great deal of criticism, but rarely do we hear of alternatives beyond. Critiques may be based on social and cultural premises, but the core of such criticism or rejection is really the factors related to the Movement itself.

As a final point, in connection with the "surjet", that is, the "force motrice" or driving force, the meaning that is to say the hidden motive or value behind the teaching approaches, several values surface. One particular value system that I could detect in one or two of the texts is *rationality*, which expects the students to approach a space rationally / reasonably. Another criterion used to evaluate a space and the student work in it is based on *originality*. Those whose intentions are to remain close to the social dynamics introduce students to the notion of organic adaptation and development in what already exists in the same way, more or less, but in a more contemporary version. There are others that introduce the value of *legibility*, meaning that a space should be made comprehensible or "legible" so that it is capable of being "read". Of course, there are also those that introduce students to the value of *beauty and an esthetic code defined by them*, but such teachers are not many and mainly found in the book on Architecture.

What can someone deduce from this reading? I would say, firstly, that there are many interpretations of the teaching of urban design and that all those interpretations have an internal coherence and a unique understanding of what the city or designer is, and for this reason, they propose a particular way of carrying on a process, a particular way of feeling that and a particular way of theorizing or creating a discourse on it. Nowadays, as this is a contemporary experience, in our schools, there are many aspects coexisting on how a city should be designed, the space must be organized and the teaching must be developed. The city, like the song variations, includes

different paradigms and aspects of what the city is, what the teaching of urban design is, and what architecture is. All this might be a reflection of our "Babel" situation, which is both our weakness and power.

The question that follows, then, is what *do we teach*? I often catch myself thinking that I know the answer (or truth), and want to teach what I have in mind that I consider best; so, I go on to develop that and try to persuade my students that among all others that is the best choice. In our every day life, however, we have come to accept that there are many realities and different conceptions and considerations of these realities. Those people who feel this the most are actually our students and with them in mind I will proceed to the third part of my presentation that concerns them.

What is it that the students want to learn?

Students have a very good understanding of the speed with which things change on a daily basis and that there are many truths, so, if we stand before them with one version of the world, I doubt that we will be very convincing. I have the feeling there is a kind of gap being created, especially by those of us who have been teaching for a certain time and who have been educated in a different framework, which raises the question of how we have incorporated in our consciousness, the changes that have been taking place.

I would like to define a little the way I understand teaching and wish to start with something David Willey mentioned very cleverly about students. He said that, as teachers, we should ask ourselves how students learn what they learn and why they learn what they learn. It seems to me that there is something missing which I, personally, consider to be very significant, that is, we should ask ourselves, *what is it that the students want to learn*? Nowadays, we are not faced with passive audiences, arriving in our classrooms as a neutral body, all eager to receive information and learn from our teaching practices. Surely, they want to learn something, but what they want to learn is dictated by the social conditions peculiar to the contemporary culture. What is peculiar about this contemporary society or culture is that there are many truths, different aspects and a strong tendency for individualization, thus encouraging them towards a desire to develop their own process in design and their own understanding of the city and architecture, as well as wanting to develop their own profile of professional life. So, if the teaching is geared towards one direction and does not remain open to what Per Olaf Fjeld suggested earlier, the gap between teacher and student is inevitable.

I think that our acts as teachers turn into teaching only when the student internalizes or appropriates the content of the course and, without this internalization, no teaching takes place and, therefore, no course. What we do as teachers is merely half, the other half is the student who will create with us a new world; so, without student participation a course cannot be completed. To clarify this point, we can use the example of a book which with a reader complements itself and breathes new life; otherwise, it sits on a shelf and gathers dust. Every student, today, wants to have his/her "world", in the same way that he/she wants to have his/her own cell phone, distinct ring tone and personal computer. It seems that this spectrum of cases we have before us and complexities of individual considerations oblige us to develop different ways of understanding and incorporating student participation in course design. This is what I felt was missing in my reading of the texts, and reflecting on my own teaching experience, I sometimes think that this is the reason why our courses lack interest for our students, mainly because they do not manage to find this articulation in our teaching, as well as the fact that personally, as teacher, I may have felt that I had lost the link between this perspective and through the teaching to create another "world".

A question that naturally follows is *what could such a teaching practice be*? I am afraid I do not have the answer and my expectations lie in the hope that through these meetings we may be able to provide answers to this delicate articulation of a new "world" through the teaching process. My feeling is that we have moved on to another pedagogical era, an approach that is not content based or centered on information to be delivered. As Per Olaf Fjeld and David Willey pointed

out, teaching is not the transmitting of information, a view supported by pedagogues who claim that contemporary courses need not be organized around information or knowledge, but on competences. In order to clarify this point, I will use an example from our own experience as parents.

Those of you who have brought up children will remember that a typical mathematical problem children need to solve is to estimate how many kilograms of paint is required to paint a room once they are given the dimensions of the room and windows. So, the student will estimate the surface and go about solving the problem, knowing how many square meters a kilo of paint will cover. This is the old approach to solving a problem, with one right or wrong answer. However, we know that there are various approaches that can be used to solve this problem if we take into account individual differences. For example, someone might start off with buying two cans of paint and see how far he/she might be able to do the job, and on the basis of this calculate the rest of the paint needed. Someone else might buy a certain supply but make an agreement with the shopkeeper to return and be reimbursed for any unused paint. These alternative approaches should be equally valid and acceptable solutions to dealing with a given problem, in fact, the teacher should give students the capacity to deal with these kinds of issues, but not to necessarily indicate a solution. On the contrary, the teacher should encourage and develop individual creativity by allowing the student to invent new ways and solutions. This is where the competences come in.

The contemporary geography of design education

Last year, in the framework of our project, we started working on this issue of the competences, but mainly with respect to the kinds of competences teachers from architectural schools consider important for students to acquire. The aim of this inquiry, which is on-going, is to arrive at an updated list of competences most valued by teachers. Loughlin Kealy and I had an excellent collaboration, last year, in trying to define these competences, with the ultimate aim of providing an opportunity for teachers and schools of architecture to structure or re-structure their course design on the basis of the definitions of the competences. Hopefully we will eventually complete this task, if possible.

Finally, I will close this presentation by saying that many years ago at a meeting in Prague, organized by Jean Francois Mabardi and Marvin Malecha, entitled "Beginnings in Architecture", it seemed that the "beginnings" suggested by the title, could be plotted on a map. For example the Nordics had the tendency of introducing their students to social considerations of the environment or world, while the British introduced their students to the functional aspect of space. The French, on the other hand, introduced students to thinking about the concept of space, whereas the Italians introduced students to the esthetic value of space. The Turks and Russians introduced students to the scientific understanding of space. So, all these approaches or starting points formed an interesting "geography" of particularities. As I like differences, I looked for a similar pattern in the reading of the texts, but could not find any, and whether this is good or bad is certainly subject to discussion. Anyway, discussion is important not only for the purpose of keeping teachers alive, but to ensure that education does not become a closed issue.

Note

1. Jean Pierre Boutinet describes these 'paronymes' of the project (projet : sujet, objet, trajet, rejet, surjet) as structural methodological parameters of the design activity. J.P. Boutinet, *Psychologie des Conduites du Projet*, Que sais-je, Presses Universitaires de France, Paris 1993, pp.84-90.

Chapter 3

Debate

Chaired by

Per Olaf Fjeld,
Oslo School of Architecture
NORWAY

Koray Gokan, Istanbul, TURKEY

I would like to make a comment on Constantin's use of the term 'object'. If we talk about urban design we start from the object 'city' and then later on, nowadays we start talking of space. Our task becomes very difficult because the subject called 'space' is no longer part of our discipline of urban design or architecture; it is the work of psychologists and sociologists. I start experimenting since my subject is really the student. I concentrate on the city and I create the environment to teach but I define the subject as close to the mind of my students. What is important then is how my students comprehend, feel, define what they are given; this is my subject and it is important. Some of the times depend on students' comprehension and perception. We deal with small scale subjects but sometimes we get into the larger scale. This is what I am trying to do but I do not know if I am doing right or wrong.

Cesare Macchi Cassia, Milan, ITALY

I found Constantin's speech very interesting in terms of the student perspective in relation to our context. As I mentioned earlier in my speech, students are the citizens of our contemporary city and, whereas for us the city must be studied, for students it represents the context of life. Our perspective on students makes for interesting discussion because although we talk about urban design, we are essentially talking about the teaching of this field.

Constantin Spiridonidis, Thessaloniki, GREECE

To answer Koray Gokan's question, I would say that organizing our course or teaching is a kind of project. This means that it must have **an object: the student, a subject: the teacher, a trajectory: the process** and, finally, **selection: based on critiques of previous activities** and, on top of that, it must have **value**.

Juhani Katainen, Tampere, Finland

Perhaps I could add to this discussion, whose general title could be "reflection on educational field theory", which is what we are actually doing here. What is very important is to understand the *location* of a school, not only the geographical, but social and spiritual location as well. They are all different, yet we use words at an abstract level that makes the whole world similar. The fact is that in various schools in my country, we use the city as a laboratory, which can sound like a generalization, but if you go to Tampere, walk along the streets and then use that industrial city of 170,000 inhabitants that has lately started changing, then that would be quite concrete. So, it is all very well to talk on a theoretical level, but a very important part of our teaching and working with students and teachers, as well, is to understand where we are located.

Therefore, in trying to educate architects, I think, it is essential that we, first of all, make them aware of local problems and work towards finding solutions for these, and then we can move on to other contexts or circumstances. In any case, they will have plenty of opportunities in their own professional lives to explore new territories and create "new worlds" if they are clever enough to do so. This attitude may sound contradictory to this new European concept of treating architectural education, leading us to talk quite generally about "a European architect" or "create a program for European architects", which is all very understandable, but we also need to keep in mind that *we all come from somewhere, and some things are closer to our hearts than others. Perhaps understanding these priorities is a good starting point for discussion.*

Ali Uyanik, Aarhus, DENMARK

In a way, I feel that *the students are projects rather than subjects, having as their object, the city*, possibly, and our goal is to take them through the educational process. However, there is a problem with this education that we have not discussed yet, which is public, that is, concerning the inhabitants of the city and civic, concerning the authorities or politicians. This means that in order for our education to succeed fully, we need the cooperation of those who care and will

provide for the city, so that we are all working for the common welfare of the city. Therefore, besides students and our efforts, we have one more object – the public and our politicians. Students do not need to be only strategically equipped to do projects that are more process oriented than design projects. When they do design projects, they have difficulty in how to design creatively on a large scale, and they end up with patterns that have nothing to do with space, sociology or real life. For example, when I was in Istanbul, I heard of a new area which was to undergo development, where high rise buildings were being placed on the Istanbul logo in the form of a tulip. It seems that was the best plan the architects could come up with because city planners usually make patterns. How do you make designs on such a large scale? This is a problem area for my students, and it is for this reason that I raised the question earlier about how to get students that are strong in design involved in the planning and not just engage strategic or analytic thinkers at that level. Therefore, we need to bring more elements together if we want to achieve some understanding or arrive at solutions.

Constantin Spiridonidis, Thessaloniki, GREECE

This is not necessarily to give an answer, but express a thought. Whatever students bring into the classrooms, whether it is ideas, patterns or images, we know that there are strong reasons for their doing so and mainly influenced by what is accessible to them in their environment outside the educational setting, ranging from their social contacts to magazines, the internet or media. It seems to me that we should not develop a negative attitude to these external influences and implicitly try to eliminate the novelty they bring in. This will only cause conflict. Rather we should respect their ideas.

Unfortunately, there is a kind of resistance in our schools of architecture to whatever is avant-garde. For example, I have often heard teachers say that the constructivist approaches in their schools are forbidden, and if teachers are not inclined to accepting such ideas, then they cannot develop. This resistance is an issue that should be discussed, in an atmosphere of understanding, because it does not do justice to the free spirit that architecture ought to have in welcoming new ideas and changes. We know that students bring in new ideas, not so much because they have been taught by others, but directly from society at large, and their personalities are identified with the co-existing layers or strata. Nowadays, there is no unique personality as was pervasive in the Modern Movement or during the '60s or '70s when we were educated. Understanding a space in terms of layers is a way for students to express themselves. I think our role as schools is to incorporate new ideas and make our students understand them, not copy them.

A few years ago, along with four schools of architecture, we ran a "Common Curriculum Development" project, having the same design theme, same location, same building, same brief, but with each project being developed in the different schools. What was surprising to discover when we brought all the projects together was that the projects could not be classified according to the individual schools, yet the teachers in the respective schools had each a distinct personality or architectural orientation. In fact, the teachers were all so different in their approaches that we had trouble communicating with each other at times. However, it was clear that the student work was not representative of the teaching orientations the students were exposed to in the classrooms, leading us to think that there must be other sources influencing our students which obviously come from outside, and this is not just fashion or the internet.

Perhaps, we need to consider that what contributes to the problem is that schools are not in touch with the changes happening in society, and unless we understand these changes, we will not be able to communicate with our students. What is more is that teachers will be wondering what they are actually doing in the classrooms if on the wall there is a reflection of the constructivist students from one school, the Modernists from another and a digital group from another space. Quite honestly, I have never seen the traces of my teaching in any of my students' works, and I do not know if this is a direct result of my teaching or stance as an architect. I suppose we can never be too complacent about what we know, and we should always be conscious of what is missing in our education because changes happen very fast and it is our students, after all, that represent our contemporary society.

Cesare Macchi Cassia, Milano, ITALY

I must admit that I learn far more from my students than what I actually offer them because I offer methodologies and suggestions, a way of thinking or understanding, but they give me a reality, which I experience every year. In the middle of the academic year, there comes a moment when I feel that I have learned so much more from them, and this has something to do with what Constantin has just mentioned.

Vana Tentokali, Thessaloniki, GREECE

I greatly appreciated Constantin's presentation and wish to refer to a point he made about students, which suggested that we should learn / teach what the students want to learn. I think this is a crucial point to consider if we are to follow the wishes of our students, which is a question I often ask myself. From personal experience, I think that the whole design process works on a rotation system from the theoretical starting point to the actual practice or construction, the final point. As educators, we deal with both, at times being aware of this and at other times not. On the other hand, students come to us not as "tabula rasa" or "clean slates", but as individuals with their own backgrounds. The question is, *what can we do with this background?* Most often, particularly when the students are not talented, if I try to find what the students want to learn, I am lost, so I will try somehow to change that background.

You may want to ask, "Well, *who are you* to do that?" or "How can you do that!" I would say that I am trying to find the starting point of the design process, which is the theoretical part, and this is the tool leading to the design practice. One of the many ways of going through this rotation system, as already mentioned, is to realize that there is a process which, quoting from Bourgeois, is "Undo and Redo", so that when I change the first phase of the design, I redo, and what we are to do as educators is to create the conditions for the students *not to want* what they want to learn, but, as a first step to "redo" what they know. To elucidate this, I can say that all of us, not just students, are products of social conditioning, however, students, in particular, are conditioned not just by external parameters, but by us, educators, as well. Consequently, we should ensure that our role is to create the conditions for them to be "formed" by *theory* through us. In this way, the educator becomes merely a vehicle of the student's theoretical formation.

Constantin Spiridonidis, Thessaloniki, GREECE

This clarification is very helpful in bringing out the fact that what I meant is not at all in opposition to what you have just described. When I talked about the ability to understand what students want, I was not suggesting that we should necessarily ask them what should be taught. What I meant is basically what you said, but I will rephrase it in my own words. We should use our theoretical knowledge in order to instill what we want to teach in the value system of the other. The question is how to make it possible, in a teaching process, to permit students to reveal their own value systems along side the value system of the teacher, and it is between these two articulations that this idea of "a new world" comes into the picture. In contrast, what is not a good strategy is the teacher's insistence on what he / she wants to teach and to restrict students to learn what the teacher has in mind.

Since changes happen so quickly in our society, our students will not go very far if they are taught one truth. Therefore, what we must teach our students is how to change, and that architecture is neither one nor fixed, but changeable because it reflects societies and cultures that are constantly changing and, consequently, architecture, as an expression of these changes will be different tomorrow. Perhaps the magic of teaching lies in the fact that it is articulated with learning, and if I were to answer David Willey's question on why we teach, I would say that there is only one answer: *we teach because we learn*, and observing the changes our students go through is valuable knowledge.

Tom Jefferies, Manchester, UNITED KINGDOM

There were some interesting points made in the previous expositions. Two of these were the ten-

sion that exists between the identification of an individual within a collective cultural milieu and the certain symbolic elements used by Constantin to describe individuality, such as one's choice of mobile phone, the type of training shoes you wear or brand of jeans, etc, as a way of identifying oneself within a collective culture which has somewhat lost its individual character. On the other hand, Cesare Cassia mentioned the kind of tension that exists between the notion of the contemporary city as fragmented, dynamic and difficult to quantify space and the Modernist or traditional notion of the city as something that is fully planned or quite static and unarguable. Now, my question is, *between these two tensions how do you see the role of the architectural institution in terms of actually mediating between these situations? Is the institution a relatively stable filter through which things can be understood? Or is it a very dynamic, fluid entity which kind of responds and reshapes itself according to contexts?*

Constantin Spiridonidis, Thessaloniki, GREECE

My opinion is that it must be a filter, but not be stable; so, it must be changeable, renewable and dynamic to absorb changes outside. For example, in the past, I never used to teach in my Urban Design course about the notion of sprawl. The urban sprawl is a term introduced years ago to mean the dispersion, but in our days it used, after Aaron Betsky, to express the fragment character (or nature) of our urbanity, that pieces of city which 'suddenly' can appear on almost any kind of environment. So, I could teach all those elements we normally teach in such a course (space, the city, the urban environment, historic environment, etc), but would never talk about a sprawl until it, eventually, made its way from outside. Strangely enough, many students know already this term from architectural literature before come to my course and use it in their design assignments. As a result, I was obliged to incorporate it into the teaching from then on. Naturally, I had to familiarize myself with the concept and understand what that was, but could not reject or ignore it because it was already part of the students' experience.

I think we should be open to new ideas, but filter incoming information as well. We cannot stress, enough, the importance of leaving our minds open; in fact, I will never forget the strong reactions brought about by the use of the computer as a design tool in our school, where it is generally felt that teachers' perspective on traditional hand design should be maintained. However, we know that students are not only uninterested in some of these methods, but will probably never even use these skills. Surely, there exists a resistance which is articulated with power games played in schools, with our inability to adapt which leads to stronger resistance and so on, but as teachers, we also feel the urgency to do something about changing that attitude.

Cesare Macchi Cassia, Milan, ITALY

Our instrument of responding to the problems posed by society in the physical project is *form*, which also represents the *tool* of the physical project. If we put the same complexity of today's world in the form, we will talk about the form on different levels. Previously, in my speech, I referred to 3 levels: the structural, typological and stylistic. Thus, we can affirm the necessity of continuity at the structural level with an interesting mixture of continuity and dynamism at the typological level and, then, accept the complete personification at the stylistic level. In this way, we can absorb the complexities inside our tools and respond to a situation for which flexibility and change implementation is absolutely necessary, working strictly with our instrument, which is *form*.

Cânâ Bilsel, Ankara, TURKEY

My question is on the same issue, once again. I think that seeing students as important subjects of a course of teaching and learning is a very important point. From my own experience, as *subjects* students are influenced and formed by two things, mainly, the everyday environment in which they live, the city and the fascination with architectural publications through the media, internet, etc. Both of these, however, are not always well integrated. On the question of what stance architectural institutions should take with respect to what is happening in cities, I would say that from my particular context, cities in Turkey, today, are undergoing tremendous trans-

formation with not only liberal policies on sprawl and fragmentation of urban space, but transformation of existing urban areas, as well. There is a general formlessness or lack of structure; so, I believe that as teachers and researchers, we should base our teaching on this criticism.

Earlier, we discussed the mission of architecture education, which of course has many missions, such as developing creativity or originality, etc., but should it not, also, have the role of being critical of what exists? Resistance can also be an avant-garde position since not all new things are actually avant-garde. Take for example, all these images being circulated to promote neo-liberal views or developments, all those brands and the fragmentation and privatization of urban space, with public space being lost. Of course, students, being part of this culture, are fascinated and tend to see all that as a positive development. So, *are we retrograde? It seems to me, we should maintain our position as critics, but also develop creative positions against them.*

Constantin Spiridonidis, Thessaloniki, GREECE

I think that this is a very crucial and interesting issue you have raised. Of course, we must be critical, but what does it mean to be a critic? If we understand this from a theoretical point of view, looking back to the '70s when we spoke of "theory and critique" which at the time referred to the inability for architecture to produce a theoretical discourse, so, the critiques substituted or replaced the theories. Times have changed, and I do not think that a critic has the same role to play as then. So, a critic today will compare value systems and the question is *which value system is best?* Obviously, we should define how we understand incoming information from the outside world, and we have a mission and obligation to express this to our students.

However, you mentioned "fascination with images" which expresses a kind of value judgment or preconceived notion of images that may be superficial or does not show a profound understanding for either the image maker or those who are fascinated by the images. It is quite possible that our interpretations are misleading in terms of what students understand from such material, and my feeling is that they have far greater depth than we give them credit for. Besides, students express themselves through such means, and our mission as institutions is certainly to present *our way* of understanding the world, but we must also accept the *ways of others* if we are to help students discover and express their own world and not just stop at experiencing ours.

If we look at the exercises or the theoretical courses in many schools of architecture, we can see that they usually start with Le Corbusier, and then go to Alvar Aalto, Luis Kahn, and their contemporaries. There are many exercises on "à la manière de" which is a typical example, but they are limited to this period of time. Of course, I am not suggesting that there is anything wrong with doing such tasks, but they should also be working on what is going on today. In my colleagues in schools of architecture been reproached for inviting avant-garde guests on the pretext that their ideas may be dangerous and should be kept out of the school. This is inconceivable, much like "The Name of the Rose" by Umberto Eco, and, I am afraid that this attitude is not only an exception in schools of architecture. In most schools of architecture, the history of architecture stops at the '60s, and the theory of architecture does not include contemporary architecture, as if it did not exist. What is crucial then is to find the articulation of those two perspectives. Surely we cannot accept everything with blind faith, but we should keep the door open for new ideas.

Cesare Macchi Cassia, Milan, ITALY

This more complex view of the form is not a mechanical factor. We can arrive at formal expressions to express language in our projects at the structural level. For example, we can refer to the projects of Tschumi or some of the first projects of Rem Koolhaas. So, we can use simple architecture to resolve structural problems. In Milan, north-east of the metropolitan area, there is a fantastic project for Montadori by Niemeyer that has organized all this part of the curb (kerb) with this image or point of controlling immensely the space far more than the single architecture. Therefore, the main point I wish to stress here is that the complexity of form is not mechanical; one can use another level by adopting a compositional attitude.

Josep Muntañola, Barcelona, SPAIN

Prof. Cassia's lecture reminds me of [.....] answer to me when I asked about this particular problem of architecture, the city,... He gave two answers, one of which is similar to what Cesare Macchi Cassia said, which is that of a neo-order for a new social life, although his view did not envisage the order of the architect's composition and so forth.

The second point is a suggestion he made for us to read a book that was very popular in the United States then, entitled, "Theatre of Spontaneity", which puzzled me at the time, wondering why we would be asked to read such a book. On reading the book I discovered why. This is a book by a German scholar from the United States that portrays a spontaneous theatrical confrontation with the educational world, thus a story built around an open confrontation between various students, professors, etc. What in my mind is important here is not to make the same mistake that made in this book in terms of the confrontation with Philip Johnson and Hitchcock. The problem was that the architect in the book was very critical of Philip Johnson and Henry-Russell Hitchcock, and although he was right, this caused a disaster with the dismissal of resulting in a dramatic split between the avant garde and in Hitchcock's order. On the one hand, we had the view that urban designers did not know how to design and that architects lived in a world apart, thus splitting the group right in the middle.

Therefore, I think that confrontation is bad from a negative perspective. What is positive is for us to have different views, but always look for a common ground, whether this is local or international, in our critical encounters between urban designers and architects so that we do not make distorted generalizations about each other. It is very important, however, for us to be critical on such points as trans.....neutral, the student. Also, it is impossible to teach architecture without teachers clearly defining their own values in relation to social and political ethics, otherwise, students are lost.

I mention this because in some schools there seems to be a lack of consistency, with students constantly improvising and changing. This must be a reflection of their teachers who may not hold consistent views or clear positions on the situation regarding the city. It is quite possible that teacher attitudes, whether we are conscious of this or not, may be leading students to be inclined in a certain direction or make certain choices about form and reality in urban design, etc, so that their acts may not be so spontaneous, after all, but influenced by our perceptions or positions on issues.

Another consideration is that in preventing confrontation, unknowingly, we may be avoiding wonderful possibilities in architecture. But, we should be careful that in dealing with possibilities, for example, prototypic solutions, like making fine forms through urban design and the making of a genetic process through form, in both fields, is not acceptable in most schools, and if a professor teaches architectural and urban planning at the same time, he / she will be dismissed since it is against the whole system or institution. A value system is not an individual matter, but has a collective dimension because new social needs are collective social needs. Of course, every individual perceives these needs in a special way, and this is where the "theatre" and necessity for confrontation comes in. After all, in an institution of completely neutral and transparent architecture, there is no architect. If there is some kind of relation between the physical form and the social meaning or content of the form, there should be some value system. Although this does not mean that we should impose this value system on the students, but use it to help them build and connect with one of their own. Nevertheless, I think that they should be made to feel that there is a connection between the form and social interaction.

This is important, because I noticed that students in some schools hop from one school to another, so that they go to urban design if there is more money and projects in this particular field, but if there is a prestigious architect doing prestigious form elsewhere, then they will go there. So, in effect they are actually using the institutions as choices are made based on economic and political factors with little regard for form and urban design. In conclusion, negative confrontation should be avoided, but positive confrontation between different views and perspectives is very important, otherwise it becomes monolithic. At the same time, we should be cautious of not avoiding new solutions and positions that do not manage to rise. In fact, we should question

such outcome and try to understand the reason(s) why. Perhaps in a negative way, we are urging students to take the two positions previously referred to, and we also create the stereotypes of the architects they want to imitate, thus contributing to the fascination.

Finally, we should aim at finding a common ground rather than confrontation because with all the different views on architectural education and a common ground, students will be made to feel confident that they can improve the interrelation between architecture and the city rather than see the task of innovating their nice final projects as an impossible one. In this way, we not only facilitate their work, but will also help them realize that the way we operate is not always based on our own value system, but the only choice we have.

Cesare Macchi Cassia, Milan, ITALY

Regarding what has been said about the individual and social needs, there seems to be a problem in the affirmation of the form of the contemporary city, which is that social needs are expressed through individual positions. The need to live in a single house is a personal, individualistic position that, at least in my country, is determined by one's overall economic and cultural possibilities. The result of this individualistic position is reflected in social expression, and the problem is that our work does not seem to be interested in offering a response to these social needs expressed through individual positions. If we take into consideration the book of Clarence Stein, then we can appreciate the validity of understanding these individualistic positions that have become social positions. In Europe, I do not see this interest. For example, in my own school there is no research on the family house that Bernardo Secchi calls "casa isolata sul lot" (a single house on a lot / piece of land). A way of arriving at a better configuration of the contemporary city, utilizing the needs of the society is a very important factor for us, and it is for this reason that we must listen and offer different scenarios, as well as work within a process which is on-

Constantin Spiridonidis, Thessaloniki, GREECE

I do not have much to add, except for some brief comments, I certainly agree with the distinction made regarding social values rather than individualistic ones, and if individual values or differences do manifest themselves, it is because there is an environment where such values are socially accepted and permitted. For example, take digital architecture, which is something new and for this reason rather 'strange' appearing before us, but there are reasons that society allows such phenomena to appear, and we need to understand the mechanisms that sustain such forces.

Emel Aközer, Ankara, TURKEY

When the object of a project is a particular city and when students are expected to analyze, read or understand it, then the notions of analysis, reading or understanding need to be clarified. For Hans-George Gadamer, "understanding" is to form a project from one's own possibilities. My question is: what skills or competencies should a student have beforehand in order to develop an understanding of a city in all its complexity?

Cesare Macchi Cassia, Milan, ITALY

There is nothing that needs to be done *before*. This is something that comes together during the actual course of the project, at that moment in time. I really do not understand how with a compositional attitude you can expect students to understand separately or at a different time how to develop an urban project. Therefore, simultaneously, the student is called upon to understand the given situation and propose a solution to the problem of a particular area. There is no difference between *understanding* and *designing* since they overlap, and you are responsible for your student during this process, so, there are actually no propeadeutic moments (preparation period) involved in this process.

Emel Aközer, Ankara, TURKEY

There are different paradigms and different theoretical perspectives in urban design. Does not every formulation of a problem situation require a theoretical / conceptual framework? Do students not need a prior understanding and critical readings of these paradigms for being able to freely choose among them, and to grasp and formulate a problem situation by means of the conceptual tools they offer?

Constantin Spiridonidis, Thessaloniki, GREECE

I understand those positions, but there is an issue that should be discussed. This task of clarifying the values, contents and perspectives of each of those paradigms must be part of the theoretical development in the school, and according to my understanding, the theory course must have as its objective the spectrum of paradigms raised over the years (past and present). So, with this knowledge that students acquire, they will select the paradigm that is closer to their understanding of the world. Our task is to give them the confidence to raise questions, and this ties in with what David Willey mentioned, yesterday, about how to facilitate students to ask the proper questions because the way that a question is posed defines how it will be answered. Therefore, in terms of design, the way a space is analyzed, for example, will determine how one will proceed through a complementary process of theory and design, which, after all, is not two different worlds, and this process should be conducted in as competent and efficient a way as possible.

Cesare Macchi Cassia, Milan, ITALY

What is important is that we always start off with a problem because it makes it easier for everyone to understand. If the problem concerns a region, then the problem is also a physical / environmental one, not just social, economic or psychological. Also, in order to get our students' attention, we should talk to them as citizens, starting with a presentation of the problem, which is actually turned over to them, and using our skills as teachers, we develop and build on student responses in an effort to arrive at potential solutions.

Patrick Flynn, Dublin, IRELAND

Just a few comments on pedagogy and how you looked at the tutor bringing something into the pedagogical process. Both teacher and student contribute to this process each bringing in their own realities, and with the merging of these realities, a third force emerges which is teaching / learning, if we want to call it that. This pedagogical process seems to acknowledge the reality of the student on equal terms with that of the tutor, as they see it, in order to try to create this force. That pretty much relates to a topic we talked about, this morning, on the "socially constructed realities", which is an interesting approach. I was just wondering, however, how do we resolve the conflict between that approach to teaching, which places a lot of emphasis on society and the here and now, as opposed to the more traditional narrative or story of architecture, which stresses the ramification or importance of individuals who often work against society to promote their own values and impose a new vision on society. That is, perhaps, the more traditional way that architecture was taught, with the view of examining such individuals and emulating them, somehow, as opposed to the idea discussed this morning, suggesting an approach that emerges from society.

Traditionally architecture was taught by presenting a series of individuals who held a view point that often worked against society and which represented their own ideological approach that they used to impose something on society. That approach seems contrary to what we have discussed earlier about the student having a reality that we accept as valid and that the teaching emerging from this teacher-student mixture of realities comes directly from the existing society or actual context as opposed to what is in the mind of one individual person.

Constantin Spiridonidis, Thessaloniki, GREECE

Would you please explain what you mean by "against society" because that is not very clear to me.

Patrick Flynn, Dublin, IRELAND

I suppose that, traditionally, architecture was taught as a series of heroic individuals who had a vision that was *outside* of society or apart from society rather than part of it (belonging to society). In some ways, you were taught to emulate (imitate) these people that had these visions apart from society rather than visions within the society.

Simon Beeson, Edinburgh, UNITED KINGDOM

I think the question addresses the idea that, if in the design project we adopt the pedagogical approach Flynn suggests is worth adopting and which may produce new, worthy results in responding to students, culture and competing paradigms, it cannot *only* be applied to the design project. It cannot be just an attitude that we apply in the studio or in design, but it has to be consistently applied in the student's education for it to make any sense. *All teachers, all of us are just one tiny voice in the student's experience.* However, the school or education is a much bigger voice, made up of lots of other tiny voices, and if we all adopt different paradigms of teaching, just as that design (pointing to a design on display) is addressed in a particular way, then I agree with many of the things you said, and I think that it is a very generous proposal of what it means to teach. However, this response is required throughout the curriculum; otherwise, it means nothing and just becomes another ad-hoc design strategy. So, there can be problem here. The history of architecture may be presented "heroically", though I am not suggesting that it is, yet it is always presented in *another* way to the way studio or design presents architecture. It is very difficult to have a consistent curriculum where the same attitude or the same values are brought across.

Constantin Spiridonidis, Thessaloniki, GREECE

Do you think that the curricula we have in our schools are consistent? You say not. If you are asking about whether it is possible to have a consistent curriculum, then I would be hesitant about it being possible, so why should this be an objective then? One might say that a curriculum must not be consistent, and an inconsistent curriculum is not necessarily ad hoc. If we agree that there are many views on the issues we are working on, sometimes far more than we expect, then a curriculum must be flexible. However, since all students are required to have that standard, basic knowledge and skills by the end of their education, irrespective of curriculum, then there may be some concern over the issue of how to ensure consistency of the competences.

I do not have a precise answer to this question, but I presume that the school has an obligation to ensure that type of consistency, even with more flexible curricula. The question that remains is *what kind of strategies we need to adopt in order to ensure consistent results through flexible curricula.* This is obviously a question of system rather than content of studies so there are many aspects to this. Although, traditionally, it is thought that the acquisition of this consistency of competences occurs in the student's mind, with the school stepping back, I believe that this is not a good strategy and that we should do more to ensure this through flexibility. This last remark is in reference to the "individual positions" you mentioned, and all I can say at this time since this is a big debate, is that I do not consider the individualistic stance as a social danger in today's world.

Paola Michialino, Newcastle, UNITED KINGDOM

I was thinking about what Constantin Spiridonidis was saying about the various interpretations of the role of the urban designer such as designer, social facilitator and cultural interpreter, and about what Cesare Cassia mentioned about the form and the importance of the form as a tool for extension. I then reflected on what I wanted my students to learn and realized that what I would like them to learn is how to deal with or answer those questions while, at the same time, being able to design forms, resolve the special questions, as well as being social facilitator and

cultural interpreter. My impression is that there are other skills, though, related more to an ability to cooperate and understand the capabilities of other professions and professionals, as well as the skill of asking questions. This latter skill is important because I have the impression that what the students tend to do and what we tend to ask them to do is *answer* questions and find forms *rather than ask* questions. Moreover, they should learn to listen to the questions raised not only by the society itself, but the space and characteristics of the city. Besides these remarks, I also wanted to ask you about what you think is the role of urban design in all that, whether it acts as a kind of medium, mediating between the architect of building constructions which are sort of finished forms and the role of the planners which involves programming the space at a certain time where there is a dynamic evolutionary movement. It seems to me that the role of urban design as a discipline is quite roundabout, involving various capabilities and inputs that allow all these elements to come together in order for the city to be built.

Cesare Macchi Cassia, Milan, ITALY

I agree with you, but I wish to remind you, once again, that your specific competence along with that of this group is a physical competence and then we offer forms to the process.

Paola Michialino, Newcastle, UNITED KINGDOM

Yes, but the problem with the students is that we teach future architects and they tend to do essentially forms which is logical but that does not give them the sensibility for everything else that is going on outside the form and that is a question of collaboration which can give them more inputs than an architect can think of.

Constantin Spiridonidis, Thessaloniki, GREECE

I think that it is not possible, now, to start defining the relationship between planners and architects because it is a very long discussion that is worth having in the near future. There are many parameters that could make them different, today. First of all if we talk about architects and urban planners, we are referring to division of labor in the domain of production of space, and we know very well that division of labor depends on social and financial conditions. Also, as a direct outcome of a certain period in our culture and civilization during the middle of this century, the cities developed in a certain way and created these professional categories that still exist today, however, the type of cooperation between the professionals have changed because work conditions are different.

Nowadays, in many competitions we can see architects permeating the decision making processes that normally involve urbanists. Take for example the competition for a 7-kilometre project along the seafront in Thessaloniki, which was actually an urban-scale project connecting the city along the seashore. In the past, such a project would draw urban planners, but nowadays, architects are invited to contest. However, this does not imply that urban planning is considered to be inadequate or underestimated in any way, but simply that the relationship between the two disciplines is different today. Therefore, perhaps it is better to say that urban design is *in between*, and this is true, but this notion has its limitations. I think that we live in a period of time that tries to eliminate limitations and limits in various ways, but an outcome of this is the confusion created between urban and architectural design.

Paola Michialino, Newcastle, UNITED KINGDOM

But this is exactly my question. We are talking about teaching urban design but we do not know what we are talking about, where it starts and where it stops.

Loughlin Kealy, Dublin, IRELAND

I just want to return, very briefly to the issue of "consistency" in a school, and also the question of who decides on the curriculum. Does the student decide by free choice? How does this smor-

gasbord get put together? I think, this comes to the core of how schools of architecture and schools of urban design find themselves negotiating within their educational landscape or their own institutions. Again, I would not be offering solutions to it, but I would think that it is extremely important that students are actually presented with some sort of vision of what they can expect to find when they enter the study of architecture, and I do not mean that in a prescriptive way. What I actually mean is that in some way or other we reach a meta understanding, as I pointed out in my speech yesterday. There needs some sort of level of coherence, and this does not refer to consistency, but a level of coherence (intelligible articulation), which allows one to explain what the mission is all about.

The search for that, if this is a serious quest in any school of architecture, is, in my opinion, a good objective and a way forward, and if it changes over time and is inherently dynamic, then it is fine and there is no need to worry too much. However, if, for some reason or in different stages, that is not a continuing quest, then one does need to be worried and one does find oneself dealing with conflicting paradigms in a much more fundamentally-conflicting way, thinking that it is a risk, a changing situation, but that things will move on. I think the connection between where we, as educators, "pitch the tent" is always, somehow, conditioned by ideologies, and I think one has to try to bring out those ideologies all the time and make them explicit because we do not function without them; they are part of the baggage that we bring, and we need to be clear about what they are and be fairly honest about them. I do not want to go much further than that, but to go back to a quote that I gave, yesterday, from Paul Clay's writing on modern art. Part of the quote I put up on the screen was "...We have found parts, but not the whole". Then, he goes on to say, "We still lack the ultimate power because the people are not with us."

Jean François Mabardi, Louvain-La Neuve, BELGIUM

I have a simple question for which I do not expect an answer, now, but I would like an explanation for your use of the term "paradigm".

Paola Michialino, Newcastle, UNITED KINGDOM

There are some details I want to add to our discussion on the relationship between urban design and architectural design. The influence of the big names, like Rem Koolhaas, Frank Gehry, Zaha Hadid, is huge. Koolhaas, for instance, claims that we have to "architectonize urban reality and the suburban sprawl", so, with the extent of such influences, I assume, that students and professors, as well, everywhere try to "architectonize" urban reality. But, I am not sure if this should be taken lightly or seriously. .

Constantin Spiridonidis, Thessaloniki, GREECE

I will not try to the details of the question on paradigms just yet because it is rather complex. I would like just to clarify that I use the term to describe an approach to architecture which has a particular way to understand architecture, the architect, the design activity and its process. This understanding is part a consistent philosophical environment characterized by a particular understanding of the human being, the society and the world.

I want to clarify that I never said that the curriculum must be defined by those students who want to be taught something. On the contrary, I would say that our task in designing curriculum is to stay close to what we understand the students want. With reference to Paola Michialino's statement, I do not think that it is enough for our students to make designs, drawings and projects, unless these activities reflect or act as a mirror for the students' own learning and understanding, which can in itself, of course, be an objective or mission of the school.

The other point I wish to add is that there are schools that have curricula that are object oriented, where architectural design and urban design appear as different objects. There are also others whose curricula are process oriented, where the emphasis is not so much on whether you teach *urban* or *architectural space*, but the emphasis is on the *design* with themes on urban space and architectural design.

Chapter 4

Readings by

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Flash-back sur la Formation au et par le Projet en Architecture

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I - Précautions liminaires

*"It is true that many answers have suggested themselves,
but none that would not need explanation,
and explanation takes time."
Virginia Woolf*

Pour éviter tout malentendu, je vous propose un poème pour décrire la posture que j'adopte pour présenter avec conviction mes positions, mes hypothèses de travail; rassemblées en un «discours théoriques doctrinal» qui est loin d'être une théorie:

«Pourquoi m'imposes-tu ce que tu sais, si je veux apprendre «l'inconnu» et être la source de mes propres découvertes?

Le bruit de ta vérité est ma tragédie; ton savoir, ma négation; ta conquête, mon absence; ta pratique, ma destruction.

Ce n'est pas la bombe qui me tue; le fusil blesse, mutile et achève; le gaz empoisonne et supprime.

Mais la vérité dessèche ma bouche, éteint ma pensée et nie ma poésie, me fait avant que je sois.

Donne-moi l'inconnu, laisse-moi te nier en construisant mon monde pour que je puisse être ma propre négation et, à mon tour, être nié.»¹

Adoptant cette attitude, je peux exposer ce texte à la critique sans succomber à toute tentation doctrinaire qui somnellerait en moi.

1. Prétexte

Comme souvent, une convergence d'accidents de parcours sert de pré-texte à l'écriture. Nous avions été invités, cinq collègues et moi-même, à lire et commenter 41 articles retenus et publiés sous le titre «*Monitoring Architectural Design Education.*» L'appel à communications avait formulé un ensemble de questions:

«Qu'est-ce que j'enseigne dans le cours de projet architectural que j'organise? Pourquoi est-ce que j'enseigne ce que j'enseigne dans le cours de projet architectural que je décris?

Comment est-ce que j'enseigne dans le cours de projet architectural dont je suis responsable? Pourquoi ais-je choisi d'enseigner de cette manière le cours de projet architectural que je décris?

Quell(s) exercice(s) est-ce que je dirige? Pourquoi est-ce que je suggère ces exercices pour l'enseignement du projet architectural?»²

L'exposé de ces commentaires devait ouvrir une des six sessions d'un Forum organisé par l'AEEA à Chania et servir d'amorce à un débat sur l'enseignement du projet en architecture.

Comme mes cinq collègues, j'avais préparé mon intervention, sans savoir que j'aurais à le faire la dernière journée. Session après session, mes collègues disaient brillamment l'essentiel de ce qu'il y avait à dire sur les intéressants documents publiés. Ce premier accident de parcours m'entraînait pendant la nuit qui suivait chaque session, à modifier l'exposé que j'avais préparé et de proche en proche, il ne me restait plus rien à dire sinon des redites ou des banalités.

Finalement, la dernière nuit précédant mon exposé, j'étais condamné à l'improvisation. Me précipitant vers la chambre d'hôtel, je passais devant une télévision qui présentait je ne sais quel cinéaste friand de la technique du «flash-back». Ce nouvel accident de parcours m'indiquait une voie possible: présenter schématiquement quelques-unes des réflexions issues de mon expérience pour provoquer l'audience.

Pour réaliser ce «flash-back», j'ouvrais donc ma consigne (fig. 1). Eh oui, je dois vous confesser je me suis inventé une consigne virtuelle à l'image de celles que l'on trouve dans les gares et dans

lesquelles les voyageurs déposent les bagages qui les encombreront mais qui serviront plus tard.

Dans celle-ci, j'entrepose ce qui constitue mon viatique pour voyager dans ma pratique.

Elle comporte plusieurs casiers au sein desquels je dépose des écrits, des notes, des idées organisées selon leur statut – axiomatique, problématique, tentative, «recycle-bin» - et selon trois de mes préoccupations majeures: l'architecture, l'enseignement, les pratiques de l'architecte.

Dans le casier axiomatique, j'accumule un ensemble de postulats, d'axiomes, de convictions.

Par contre dans le casier problématique, les questions s'accumulent, parfois se transforment en questionnements que je n'ai pas toujours le temps d'aborder au moment où ils m'interpellent; il me faut différer les tentatives de mise en ordre, d'interprétations.

Ces deux ensembles se sont constitués au fil du temps à partir de ma pratique d'enseignant qui, comme ma pratique de projeteur, génère chemin faisant de nouveaux savoirs et de nouveaux savoir-faire incorporés mais aussi de nombreux doutes tout aussi implicites.

Chaque fois qu'un prétexte et qu'un intervalle de temps, se présentent, je tente de les expliciter. Je fais une tentative de «discours théoriques» qui s'inscrivent dans un «work in progress» qui me sert de miroir dans lequel se reflète sans complaisance une pensée en mouvement.

Ces tentatives me permettent d'accumuler *«[...] de petites discontinuités dirigées, de petites adaptations qui jouent toutes dans le même sens»*³ - minuscules et imperceptibles innovations - qui provoqueront un jour peut-être *«une innovation plus importante qui portera, alors le nom et la date du tout dernier segment.»*⁴

Lorsque la tentative est réussie - publiée ou non - elle me sert *«[...] d'instruments conceptuels pour lire ma pratique,»* et *«pour être à leur tour questionnés dans et par la pratique et non pour la configurer.»*⁵

La veine parfois s'épuise. Elle ne génère plus de questions, elle me prive de ma posture de recherche. Ces écrits passent au «recycle-bin» sous forme d'écrits de deuil; un deuil qui me permet d'accepter la fin de quelque chose mais pas de l'oublier car la présence de ce qui importe persiste et canalise ces petites discontinuités, ces petites adaptations, pour les diriger toutes dans le même sens, mes attentes constituent un horizon (fig. 2) ayant une certaine permanence dont la principale consiste à améliorer ma pratique d'enseignant.

Cet horizon passe aussi par l'interprétation que je fais des attentes de la société, de l'Université, du programme de formation en architecture.

Tendre vers cet horizon provoque une dynamique, au cours de laquelle se définissent des objectifs plus précis; ils sont alors partiels, adaptatifs et révisables en fonction des circonstances et des contingences du moment, tout en gardant le cap.

C'est donc de manière quelque peu improvisée que je présentais des extraits de ma consigne

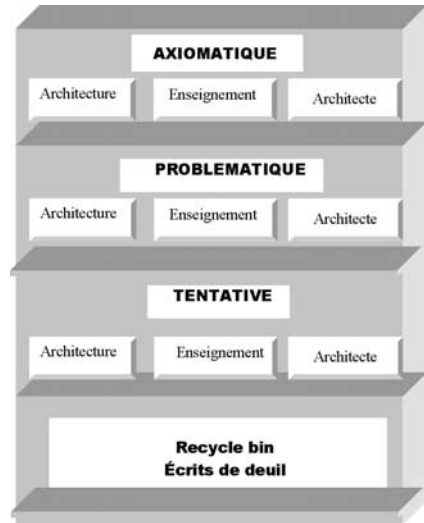


Figure 1

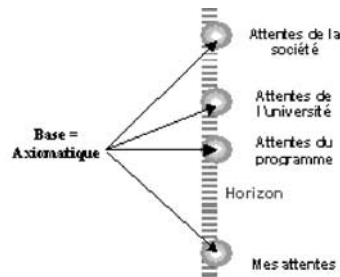


Figure 2

à Chania. Deux derniers accidents de parcours, la bienveillance des participants à leur égard et les questions soulevées, et une plage de liberté dans mon agenda à mon retour de Crète, se muèrent en prétexte pour en expliciter les points d'ombre, bref pour «selfspliquer» comme dit Ponge.

2 - Les contextes

De même qu'un pré-texte précède un texte, un con-texte l'éclaire.

2.1 - Le parcours de l'écrivain comme contexte d'un texte en devenir

*«Je sais comment tu t'appelles,
Mais je ne te connais pas.»*
Proverbe supposé égyptien

Comme tout individu, comme chaque étudiant, mes limites et mes potentialités d'enseignant sont le fruit d'un héritage génétique et d'une trajectoire semée d'accidents de parcours. Mais l'un comme l'autre sont en devenir, aspirées par des motivations; un jeu complexe fait de volontés, de désirs, de rêves (fig.3) oscillant entre réalisme et utopie.



Figure 3

Lors de mes rencontres avec les étudiants, nous naviguons l'un comme l'autre «[...]dans un océan d'incertitudes parsemé d'îles et d'archipels de certitudes.»⁶

L'air de ne pas y toucher, les mots, les graphes participent à grossir les océans d'incertitudes dans nos échanges avec les étudiants. Des mots, des graphes des images qui permettent de nous écouter. Mais nous entendons-nous?

La plupart du temps des connotations⁷ parasitent le dialogue; le débat formatif se dilue, se transforme en monologues qui se croisent sans se rencontrer.

Je pose alors mes définitions, comme des balises (fig. 4), car comme dit Ponge: «*Les mots ont beaucoup d'habitudes et de puissances, il faudrait chaque fois les ménager, les employer toutes*». Cela donne à chacun la possibilité de se démarquer, de situer sa définition par rapport à celles des autres, ne fût-ce que par d'infimes nuances pour nous entendre en levant la cause de bien de malentendus; de mal-entendus.

Mais tout aussi important les mots évoquent, invoquent et convoquent d'autres mots et des images, et chacun à sa mémoire, faite de «stocks» et de «processeurs» associant mots et définitions (fig. 5) ainsi que mots et images (fig. 6).

Tout au long des ateliers - de l'enseignement du projet - ces deux croquis guident l'idée d'enrichir le vocabulaire - mots et images - en partant du langage acquis par les étudiants vers le vocabulaire disciplinaire. Car il est évident que pour concevoir, composer, élaborer un projet même Dieu nous dit la Bible a eu besoin de convoquer des mots et d'évoquer des images. Il est vrai qu'aujourd'hui nous avons des processeurs qui génèrent des formes qui ne font pas encore partie de

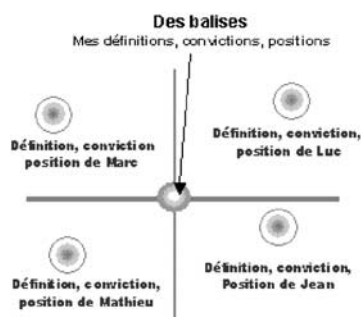


Figure 4

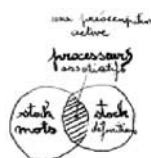


Figure 5



Figure 6

la mémoire collective, et il serait intéressant d'étudier combien de temps il a fallu à des Gehry et des Libeskind pour arriver à apprivoiser et maîtriser ces nouvelles mémoires virtuelles⁶; ces mémoires formelles que nous n'avons pas encore incorporées.

La base est l'origine qui permet d'être original comme le dit Gaudi: «*Ser original es volver al origen*»; une origine générative qui permet une cohérence; un fondement. Et la structure s'entend ici dans le sens où Bateson la définit: «*Si l'on brise la structure (pattern dans le texte anglais) qui relie entre eux les éléments de l'apprentissage, on en détruit nécessairement toute la qualité*». Base et structure me donnent les instruments de navigation entre les balises que sont mes définitions, positions, convictions pour maintenir le cap vers l'horizon et me laisse du mou pour improviser pour exploiter les circonstances, les accidents de parcours.

Mais en plus de mon parcours, ma trajectoire qui constitue mon premier contexte, il y en a d'autres.

2.2 – Contextes institutionnels et humains de mon enseignement

*Rencontrer un crocodile sur terre est dangereux.
Rencontrer ce même crocodile dans l'eau est mortel !
Proverbe supposé égyptien*

Je sors souvent de ma consigne le petit «crobart» reproduit proprement à la figure 7 pour me rappeler que mon enseignement n'est qu'une modeste contribution à la formation d'étudiants, à laquelle contribuent bien d'autres acteurs.



Figure 7

Ces ensembles et sous-ensembles sont en tension entre un passé mal connu qui les a marqués et des volontés, des désirs et des rêves d'un possible futur imprévisible qui lui insuffle une dynamique. Cela évoque d'emblée une première question: celle de la motivation des acteurs concernés l'étudiant comme l'enseignant.

Comme notre société occidentale, les jeunes générations - quelque peu amnésiques - doutent de leur passé et sont en manque de projet d'avenir. Elles se réfugient dans un «ici, ailleurs et maintenant», et un «tout et tout de suite»,⁷ qui a tendance à réduire leur motivation. Plus que jamais l'enseignant se doit d'être, avant tout un apéritif; et comme le dit H. Ciriani leur «*donner l'appétit d'apprendre*».⁸

_ cela j'ajouterais que l'accélération du rythme des changements que nous vivons, demande un surcroît d'effort de la part des enseignants. Plus que jamais, ils sont eux-mêmes confrontés à la difficulté de distinguer dans ce perpétuel changement, le structurel du conjoncturel dans ce qui fonde leur enseignement. Il leur faut adopter une posture de recherche⁹ pour donner à leur enseignement une base et une structure pour prendre conscience de leur «*style*» et le forger; leur style comme Buffon le définissait qui «*[...] n'est que l'ordre et le mouvement qu'on met dans ses pensées*» ou encore qui «*[...] suppose la réunion de toutes les facultés intellectuelles; les idées seules forment le fond du style, l'harmonie des paroles n'en est que l'accessoire et ne dépend*

que de la sensibilité des organes [...] et pour finir qui [...] est l'homme même.»¹⁰

Je tenterai de m'en expliquer plus loin dans les limites que m'imposent les trois mots-clés qui définissent les relations entre les acteurs en présence (fig. 8) mais il me faut d'abord les asseoir en posant quelques définitions.

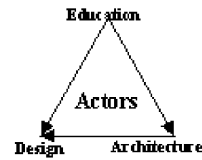


Figure 8

II – Le Mots-clés

Les trois mots-clés contenus dans le titre du forum de Chania 2005, comme celui de la publication - «*Monitoring architectural design education*» - ont permis de centrer et délimiter, tout à la fois, l'objet des écrits publiés et celui des discussions. Mais c'est en français que j'avais rédigé les notes préparant ma présentation. Sans y réfléchir j'avais instinctivement traduit le titre par: «*Etat des lieux de la formation au projet architectural*»; pourquoi n'avais-je pas utilisé éducation et design, ce que les dictionnaires m'autorisaient à faire? Est-ce que je trahissais la pensée des organisateurs? Je ne le crois pas mais j'estimais qu'en français et dans ce contexte, éducation comme design avaient de *mauvaises habitudes*.

1 – Projet versus design

Le terme design a une histoire «*indissociable de celle de la révolution industrielle*» et sa raison d'être est la plupart du temps «*Faire vendre et servir la marque. [...] Les boutiques doivent donner aux clients le plaisir et l'envie d'acheter tout en assurant la notoriété du distributeur.*»¹¹

L'architecture ne peut être assimilée à la bouteille de Coca-cola, issue de l'imagination fertile de l'auteur de «*La laideur se vend mal*»¹² Très belle, sans doute on la retrouve partout dans le monde, peut-être même sur la Lune ou sur Mars mais elle finit toujours dans la poubelle. Or, l'objet architectural est pensée et projetée en rapport à un lieu; c'est une inclusion dans un contexte physique et humain préexistant, qui propose un ancrage et une mise en relation d'êtres humains en devenir.

Dès que j'utilise le mot design, je suis biaisé – détourné de l'architecture - par l'évocation d'objets naviguant à l'aveuglette dans l'espace, sans faire référence au lieu dans lequel ils se situent et au groupe humain auquel il s'adresse.

Je ne puis m'empêcher de penser que ce rapport à l'objet industriel que le design entraîne, a influencé la (re)production d'Unités d'habitation en des lieux et des cultures aussi divers que ceux que l'on trouve à Marseille, Nantes, Briey-en-Forêt, Firminy ou Berlin. Malgré toutes leurs qualités, il faut donc m'en détacher à regret.

Je préfère donc projet à design, car un méridional et un homme du Nord, un vendéen et un berlinois ne peuvent être ramenés à un être *sans qualité*¹³; un être purement statistique représenté par sa moyenne.

A tort ou à raison, lorsque je pense «design de vie» je pense assez vite à l'apparence d'une relation harmonieuse emballant un contenu existant pensé et conçu par d'autres; est-ce cela qui aurait généré le «*façadisme*»? Aussitôt que le mot design apparaît, il convoque en moi l'idée d'investir pour vendre et pour pousser à consommer-jeter, alors que lorsque je pense «projet de vie» l'apparence est essentiellement le résultat de l'harmonie des rapports d'éléments propre à un être et un devenir dans une société située dans une culture et une géographie données.

De plus je suis de la génération bercées par les «*design methods*»¹³ qui ont fleuri dans les années 1950, et dont un des protagonistes dit en 1992: «*Though design methods became for a time a popular subject, the movement did not have the effects Jones had hoped for. Some of those who adopted the new methods took design to be a completely rational, explicable process and used the methods as pretext for excluding intuition all together (Jones, 1992)*»¹⁴

Je serai donc amené à distinguer procédure de processus pour aborder les notions enseigner et projeter.

2 - Formation versus éducation

«Lorsque je cesserai d'être en formation, d'avoir l'appétit d'apprendre, je serai vieux.»

Proverbe supposé égyptien

Ma méfiance vis-à-vis du terme éducation, vient probablement d'une ancienne lecture qui proposait l'éducation comme *«la technique collective par laquelle une société initie sa jeune génération aux valeurs et aux techniques caractérisant sa civilisation. C'est donc un phénomène secondaire et subordonné à cette civilisation. C'est normalement un résumé de cette civilisation et elle la représente de manière condensée.»*¹⁵

Bien que partagée par beaucoup, cette définition ne me satisfait pas pour plusieurs raisons.

D'abord, la dynamique qu'elle évoque fonctionne à sens unique; elle pose la jeune génération comme objet. (fig. 9) Un objet mal léable et corvéable à merci.

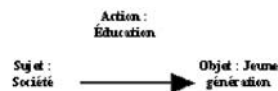


Figure 9

Le nombre croissant d'étudiants dans les universités, nous a amenés à considérer l'étudiant dans ce sens, ce qui nous ramène à *«l'Homme sans qualité»* alors que chacun d'entre eux, au moment de notre première rencontre est muni d'un viatique intellectuel qui le dote d'une personnalité que nous méconnaissions la plupart du temps; parfois même nous l'ignorons avec superbe.

Ensuite, la société n'est pas un bloc homogène. Cette définition ne rend nullement compte de ses singularités socioculturelles, elle pose une *«référence normative»*: celle d'un groupe dominant.

Il en va de même dans les programmes architecturaux que nous fournissons aux étudiants comme base des projets qu'ils auront à élaborer, par exemple maisons d'artiste, de *«princes»* ou logements sociaux. Les premiers - les alpha ou les happy few de Huxley - sont différenciés des autres - les gamma du même Huxley - en les reléguant au niveau d'êtres statistiques.

Cela a conduit de nombreux auteurs à questionner l'éducation et les institutions qui la prolongent à partir de l'inégalité des chances. Peu d'entre les étudiants participent de cette culture des *«princes»* qui aujourd'hui n'ont d'yeux que pour les choses d'un passé révolu. Pourtant ils sont enracinés dans la leur.

Ils ne peuvent imaginer ce que nous leur demandons de faire qu'à partir de caricatures simplistes de ces vies princières ou bourgeoises qu'ils sont progressivement amenés à prendre comme références d'autres modes de relations humaines dans le cadre de l'occupation de l'espace de l'habiter. La chose projeter est hors de leur vécu, en dehors d'eux et privilégie l'apparence et contribue à conforter une société dans laquelle il suffit de paraître pour être.

Plus pernicieusement, et plus grave peut-être, cette référence normative hiérarchise les savoirs et les savoir-faire. Selon cette hiérarchie le diplôme confère des statuts et installe leurs détenteurs dans l'échelle sociale, leurs compétences et leurs émotions profondes devenant quasi subsidiaires.¹⁶

Enfin pour titiller Descartes qui disait: *«Je pense donc je suis.»*, je dirais: *«Je suis humain donc je pense»* pour insister sur le rôle du corps et du faire dans l'apprentissage et la pratique du projet, car *«pensées et sentiments ne sont plus ceux qui dirigeraient souverainement l'instrument du corps, ce sont des significations qui comme des instruments à interpréter sont "soufflées", pour ainsi dire, par le corps et le soi, comme si le soi dans le corps voulait quelque chose. L'affirmation: j'ai pensé cela, car je l'ai voulu devient alors ridicule de prétention. Bien plutôt, il faut poser la question du pourquoi de ces pensées et de ces sentiments: la réponse se trouve dans le soi qui exprime par leur intermédiaire qu'il veut quelque chose.»*¹⁷

C'est pourquoi, lorsque apparaît la locution *«architectural education»*, j'ai pris l'habitude de par-

ler de formation¹⁸ pour me référer à une activité faisant partie de l'éducation, dans laquelle l'étudiant est en même temps **objet et sujet** de sa formation (fig. 10).

Après ces quelques mises au point, il est temps de révéler l'axiomatique sur laquelle elles reposent.

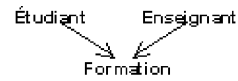


Figure 10

III - Axiomatique

Les hypothèses de travail, les axiomes ou les postulats portent d'abord sur la société dans laquelle s'opère la formation (fig. 7) la considérant comme un des acteurs de la formation. Par la suite, et de proche en proche, sont présentés ceux qui se rapportent aux différents contextes qui concernent ma pratique d'enseignant.

1. Hypothèses de travail concernant la société

C'est une société fascinante par les possibles que lui offre le développement des savoirs et des outils, mais par le seul fait qu'elle aspire à la «démocratie», elle s'engluie dans de multiples contradictions. Car il est vrai qu'il n'a jamais été autant question des droits de l'homme et de la femme mais ceux-ci sont assujettis aux lois d'un marché impitoyable qui sont régies par le «*Malheur aux vaincus*» de Jules César.

Gourmande, elle veut tout et tout de suite. Elle s'installe dans ce qu'Augé nomme une «cosmotechnologie» qui nous entoure *«d'objets sophistiqués qui envahissent notre existence et semblent lui donner un sens. En même temps, ils sont plus près de nous; ils nous assignent à résidence, se greffant sur nos corps, nous permettent de communiquer avec la terre entière sans nous déplacer, nous habituent au cocooning technologique qui nous met à l'abri du passé et du futur comme si seul le présent existait.»*¹⁹

Vouloir tout et tout de suite dans le présent semble la dispenser d'interroger son passé car avec M. Bloch je pense que *«L'incompréhension du présent naît fatalement de l'ignorance du passé.»* et qu'il *«[...] n'est peut-être pas moins vain de s'épuiser à comprendre le passé si l'on ne connaît rien du présent.»*²⁰

Cette absence de relecture et d'interrogation de l'histoire renforce l'absence de «références» pour asseoir – fonder – cette globalité et se projeter dans un futur; cette absence est sans doute générée par les désillusions qui l'ont rendue méfiante de tout ce qui ressemble aux «*grands discours*» du siècle dernier.

La mobilité, les réseaux de communications et la mondialisation des marchés tendent vers une globalisation à double face. La première pourrait être porteuse d'utopies rêvant d'un monde sans frontières, de paix, de moins d'inégalités, etc. L'autre, est inquiète, face à des restructurations économiques peu transparentes et génère des replis identitaires et sécuritaires, exploités par des intégrismes de tout bord qui offrent des références refuges – présentées comme seules et uniques vérités – opérant une dichotomie dans cette globalité; les «bons» doivent imposer au «mauvais» leur vérité à n'importe quel prix; le ralliement à cette vérité se fait par l'anathème porté sur l'autre, plutôt que sur un réel projet de société anticipant les dérives possibles de la surexploitation et de la surconsommation. Une surconsommation qui porte aussi sur l'espace aménagés et/ou construits saturant notre environnement et introduisant une surabondance de signes qui brouillent les repères et en rendent la lecture difficile.

Sensible à ces questions d'environnement, notre société se base sur des principes généreux pour en parler mais en même temps, elle développe des comportements individuels ou collectifs agressifs face aux contextes humain et physique.

Défenderesse du droit à un habitat digne pour tous, elle est en même temps résignée devant la croissance du nombre des «sans abris» dont le nombre croît, même dans les pays riches.

Passionnante à vivre par les possibilités que nous offrent les nouveaux savoirs et les puissants

outils qu'elle met à notre disposition, cependant elle ne l'est que dans la mesure où nous en acceptons la complexité, l'incertitude de son avenir et la fragmentation qui rend évidente l'impossibilité de l'appréhender «comme une totalité». nous renvoyant à des «réalités» qui ne sont que des interprétations du réel si cela existe.

2. Hypothèses de travail concernant la formation universitaire

Mon enseignement est inséré dans une institution universitaire qui, à travers la mission qu'elle se donne, exprime la vision qu'elle a de la formation. Si j'ai accepté de participer à une des formations qu'elle offre c'est que, à défaut d'être totalement d'accord avec sa vision des choses, elle me permet de fonctionner selon mon axiomatique.

2.1 – La finalité de la formation universitaire ou la conquête de l'autonomie

L'hypothèse de travail relative à la finalité de la formation universitaire, consiste à rechercher à : «Accroître l'autonomie^v solidaire de l'étudiant à chaque stade de sa formation.» ²¹

En d'autres mots, parvenir progressivement à ce que l'étudiant puisse penser, juger, choisir, décider et agir sans les béquilles ou les prothèses que représentent les professeurs et les assistants; et revient à considérer ces derniers comme marchepieds; comme tremplin pour l'envol de l'étudiant ce qui suggère que l'enseignant prévoit des filets pour amortir les chutes éventuelles.

Affirmant cela, je me situe dans un lignage intellectuel^v – un courant pédagogique - que je résumerai par l'extrait suivant : «C'est seulement lorsque l'étudiant cesse de s'en remettre au jugement d'autrui qu'il apprend à identifier et à évaluer des problèmes, à élaborer des interprétations réfléchies et défendables, à arriver seul à des conclusions et à les vérifier.» ²²

2.2 – Hypothèses sur les modalités et la stratégie pédagogique

a - Formation instruite, formation construite

Ayant posé l'accroissement d'autonomie comme finalité, et l'étudiant comme l'objet et le sujet de sa formation, ma deuxième hypothèse de travail considère la formation comme un diptyque dont:

- l'un des volets contient la formation instruite dont l'institution est responsable; le professeur en est le moteur et l'étudiant en est l'objet;
- l'autre contient la formation construite dont l'étudiant est responsable. Il en est le moteur et s'impose comme sujet.

La figure 11 combine les deux propositions précédentes en vue de me donner un guide «idéal» pour rêver d'un programme d'étude à partir d'une stratégie pédagogique:

- au départ l'étudiant entame ses études universitaires avec le degré d'autonomie de pensée, de jugement, de décision et d'action, qu'il a acquis à ce stade,
- au cours du dernier semestre du cycle pris en considération, il travaillerait sans l'encadrement des enseignants, ce qui modifie ce qui semble être la tendance actuelle. Les taux enseignants/étudiants seraient le plus élevés dans les premières années et iraient en s'amenuisant.

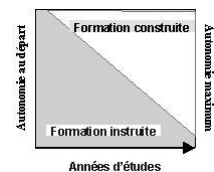


Figure 11

Lorsqu'il est question de formation instruite le professeur «professe», cela paraît évident, mais les avis divergent sur ce point. D'aucuns agissent comme si le professeur était un informateur, un mentor, un facilitateur. Ceux-la voudraient qu'il soit neutre, un insipide informateur. Il ne prend pas position. Ce faisant, il se démarque rarement de la fonction d'assistant.

Pour moi un professeur est sensé avoir une position et il l'argumente du mieux qu'il peut. Il le fait, non pour que l'étudiant l'adopte, mais pour le conduire à construire progressivement la sienne. C'est alors, et seulement alors, qu'il peut changer de casquette et adopter la posture de guide, de mentor pour y parvenir.

Je ne pense pas que dans notre champ disciplinaire l'information soit neutre et, dans l'impossibilité de transmettre toute l'information, celle-ci sera forcément biaisée par les valeurs non dévoilées à partir desquelles le professeur choisit l'information qu'il transmet, la manière dont il pense, il agit ou pratique. Quand c'est le cas:

- Le débat d'idées – un des fondements de la formation universitaire – est inexistant et se transforme en opposition de personnes qui ne peuvent que supputer la position des uns et des autres et leur coller des étiquettes dont le simplisme est parfois ahurissant.
- Les valeurs non dévoilées opèrent insidieusement à l'occasion d'évaluation qualitative, et ne permettent pas à l'étudiant de se situer, cela retarde l'accroissement de son autonomie de jugement.

Par contre lorsqu'il est question de formation construite, l'étudiant doit prendre des initiatives sinon il s'exclut de lui-même; initiatives à prendre dans un champ qui ne se confine pas à l'offre de l'institution; elles mettent en relation sa vie, la société dans laquelle il est immergé avec les nouveaux savoirs et savoir-faire que l'institution lui transmet. Cela lui permet de se différencier; et à son tour de choisir, de construire progressivement son propre style, toujours dans le sens où Buffon le définissait.

b – Evaluation «formative» versus évaluation «habilitative»

Peut-on penser formation sans parler d'évaluation? En effet, lorsqu'il est question d'enseignement, l'accent est souvent mis sur les objectifs pédagogiques et la vérification que ceux-ci sont atteints. Cela habilite l'étudiant, assure que le pré-requis nécessaire pour suivre le cours suivant ou qu'il a les compétences requises pour exercer une profession. C'est utile mais totalement insuffisant si immédiatement après ou en même temps, il n'est pas question du mode d'évaluation.

Ainsi, comment puis-je me permettre de parler d'autonomie de jugement, si au moment même où un jugement est prononcé, je ne prends pas en compte cette notion d'autonomie, en me limitant aux objectifs particuliers. Si par le biais du mode d'évaluation, j'exclue l'étudiant du jugement porté, il n'est plus qu'objet et non sujet de sa formation. Tout ce qui aurait été fait est anéanti; l'enseignant n'est plus crédible; il perd son «autorité», il ne lui reste que le «pouvoir» que lui confère son statut. Il ne suffit donc pas de poser des axiomes, d'avoir des convictions, il faut en assumer les conséquences.

La relation entre le professeur et l'étudiant navigue sur le fil d'un rasoir car le statut de l'étudiant et celui de l'enseignant, sont différents. Celui de l'enseignant met l'étudiant à sa merci par le seul fait qu'il est tout à la fois juge, juge d'instruction, avocat de la défense, procureur représentant l'institution. De plus le jugement est généralement sans appel. La société semble accorder plus de droit à un assassin qu'à un étudiant? Il est vrai que l'assassin reconnu coupable après avoir fait appel à son droit de recours est privé de liberté, voire dans certains pays condamner à mort, mais la différence avec l'étudiant est sournoise. Ponge disait que les mots ont beaucoup de puissance, ils l'ont aussi dans la violence, cependant leurs effets sont différés et elle n'éclate pas au grand jour. La privation de liberté, la mort est dans ce cas d'une autre nature. Elle fait perdre à l'étudiant sa dignité, le respect de lui-même dans son for intérieur comme en public. Parfois les mots tuent

*«Ils sont si légers pour celui qui les jette,
Si lourds pour celui qui les reçoit,
La flèche est partie déjà tu la regrettes,
Elle s'est plantée au fond de moi»²³*

Malheureusement par son éducation, par la somme de ses formations antérieures, l'étudiant se

présente souvent en victime consentante et les flèches font leur effet.

Une nouvelle et grave question est ouverte. Seule une vague réponse s'offre à moi: Opposer à l'évaluation qui habilite, une évaluation qui participerait à la formation et à l'accroissement d'autonomie qui sera esquissée lorsqu'il sera question de l'enseignement du projet.

2.3 – Hypothèses de travail relative aux procédures et aux processus

Souvent les procédures qui régissent l'enseignement du projet sont confondus avec les processus.

Un commentaire portant sur les méthodes de design définies par les théoriciens des méthodes de design des années 1950, les présente comme «[...] *a completely rational, explicable process and used the methods as pretext for excluding intuition all together.*» or ces méthodes portaient essentiellement sur les procédures à suivre et non sur les processus qui étaient relégués au statut de «black box» ou boîte noire qualifiant un insaisissable, dispensant de ce fait d'en parler. Cela m'a conduit à faire la distinction suivante: Pour enseigner comme pour projeter les procédures sont indispensables, car celles-ci définissent un début, des étapes et une fin. Mais les activités comprises entre les étapes ainsi précisées font appel à des processus dont on ne sait pas ni quand ni où ils ont commencés et qui n'auraient pas de fin si aucune procédure ne venait pas à en interrompre le cours.

Comme le suggère la code tendue (fig. 12), la procédure est linéaire parfois extensible – le ressort- tandis que le processus est enchevêtré. Il est difficile, si pas impossible, d'en retracer le début et la fin, moins encore son cours. Seule la procédure impose arbitrairement une fin pour des questions de limite de temps ou de moyens. Je sais quand je commence un cours et l'horaire m'impose de finir à une heure précise; une procédure ! Je ne sais pas quand je commence et si je finis de penser, de spéculer sur mon enseignement; un processus !

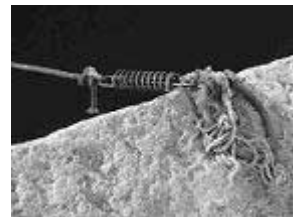


Figure 12

2.4 - Hypothèses de travail relative aux savoirs et aux savoir-faire

*L'érudit apprend l'histoire,
L'homme cultivé l'interpelle !
Proverbe supposé égyptien*

La première consiste à dire que la formation universitaire est un phénomène culturel. Un large consensus pourrait exister sur cette hypothèse, mais il ne serait que superficiel. En effet, il existe plus de 500 définitions du mot culture et chacun de nous l'entend différemment; le mal-entendu n'est pas loin.

La définition qui m'a semblé la plus pertinente pour expliciter la façon dont je la comprends, est: «*La culture est un ensemble de connaissances acquises qui permettent de développer le sens critique, le goût, le jugement.*»²⁴ Elle se complète par: «*La culture c'est aussi le développement de certaines facultés de l'esprit et du corps par un exercice approprié.*»²⁵

Elle permet «[...] de ne pas être désarmé quand on vous place dans différents problèmes » et requiert «[...] de pouvoir faire la navette entre des savoirs compartimentés et une volonté de les intégrer, de les contextualiser ou de les globaliser.»²⁶

Mais encore me faut-il parler de la culture d'un sujet singulier - vous ou moi en l'occurrence -, qui n'existe que si nous intériorisons ces informations «externes»: «*Ces créations de l'esprit [...]: l'art et la morale, la science et les objets finalisés, la religion et le droit, la technique et les normes sociales, sont autant de stations par lesquelles doit passer le sujet pour gagner cette valeur spécifique qu'on appelle culture. Il faut qu'il les intègre en lui, mais c'est bien en lui-même qu'il doit*

les intégrer, c'est à dire qu'il ne peut les laisser subsister en tant que simples valeurs objectives. Tel est bien le paradoxe de la culture: la vie subjective [...] doit passer par ces créations de l'esprit objectif.»²⁷

La seconde hypothèse consiste à affirmer que de la pratique - qu'elle soit celle de l'enseignant ou du projeteur - émerge un savoir incorporé par le sujet enseignant ou projetant qui produit un savoir faire ou en d'autres mots améliore sa pratique. Cependant celui-ci est difficilement transmissible lorsque ce savoir n'est pas explicité.

2.5 - Hypothèses de travail relatives à la formation en architecture

Une de celles-ci est liée à l'hypothèse que toute formation universitaire de l'architecture ne peut se produire qu'en référence à une culture générale englobant la culture disciplinaire. De plus en ce qui concerne la culture disciplinaire, j'ai été amené à distinguer la culture architecturale d'une culture projectuelle.

Pour la culture générale en architecture, la formation instruite donne la possibilité, à travers les essais, les exposés et les livres de références, de donner les éléments qui permettent de situer et reconnaître les principaux mouvements de la pensée architecturale ainsi que de ses produits, l'un et les autres mis en relation avec le contexte de leur production. Elle donne **le corpus** qui sert de base à l'analyse d'objets existants, mais c'est seulement par la capacité de faire «*la navette*» entre les enseignement fragmentés que la formation construite - qui peut être guidée, encouragée au début - permet d'en reconnaître et d'en comprendre la composition, les qualités, bref d'interpréter sa constitution.

La culture projectuelle ne s'intéresse plus à l'objet déjà constitué mais à l'objet à venir, de l'objet en constitution, de son émergence. La formation instruite se doit alors de canaliser la réflexion que l'étudiant fera à partir de sa propre pratique d'explicitier ses savoirs incorporés et en cherchant à comprendre comment la tête de l'architecte fonctionne de se reconstruire son lignage de concepteur, car si nous sommes toujours dans le domaine de la composition nous accédons par la culture projectuelle au domaine de la conception pour autant que l'on accepte la distinction théorique proposée ici.

IV – L'enseignement du projet, pratique et théorie

Souvent, le programme de l'institution annonce que le projet est au «*centre du programme de formation*» et utilise un mode pédagogique qui depuis près d'un siècle est l'objet d'une attention particulière de la part des sciences de la pédagogie et a été à la base de nombreuses réformes au niveau de l'enseignement maternel, primaire, secondaire et récemment au niveau de l'enseignement universitaire dans des facultés de médecine, d'ingénierie, de droit ou de biologie.

En architecture, l'enseignement du projet prend la place du lion dans l'horaire et c'est très bien ainsi. Encore faut-il nous entendre sur la manière dont les uns et les autres entendent par enseignement du projet, d'une part, et sur la stratégie pédagogique ainsi que la manière d'opérer, d'autre part.

Cependant, il serait abusif d'affirmer que dans la pratique l'enseignement fonctionne comme un centre qui encouragerait la «*navette*» entre les savoirs et les savoir-faire des multiples disciplines qui ont leur place dans le programme de formation. En règle générale les enseignants du projet ne savent ce qui est enseigné avant leur enseignement ou parallèlement à celui-ci. Pourtant ils se plaignent souvent que les étudiants n'ont aucune culture, qu'ils ignorent l'histoire, qu'ils s'intéressent à peine au constructif ou encore à l'humain mais eux-mêmes, - au centre de la plaque tournante - ne font rien pour valoriser ces cours ou pour s'en servir dans leur enseignement.

A leur décharge, il faut avouer que la multiplication des intitulés et des cours à options, la multiplicité des réformes qui changent les programmes tous les cinq ans, rendent la vie difficile aux

enseignants qui tentent de se mettre au courant des contenus de programmes.

Cela n'excuse pas tout, car la relation aux enseignements théoriques est prônée depuis des millénaires que cela soit dans les secrets du temple en Égypte où les artisans ayant maîtrisé leur pratique, ou avec Vitruve qui écrivait au début de notre ère que la science de l'architecture «s'acquiert par la pratique et par la théorie. [...] ceux qui ont joint la pratique à la théorie ont été les seuls qui ont réussi dans leur entreprise, comme s'étant munis de tout ce qui est nécessaire pour en venir à bout.», ou encore au Moyen-âge lorsque le maître admettait enfin l'apprenti dans «l'atelier des tracés».²⁸

Si pour l'architecte ayant déjà une certaine pratique – c'est en général le cas des enseignants du projet – «[...] les théories et les explications ne sont pas nécessaires pour pratiquer ou penser (ici je précise que j'ai lu: pratiquer ou penser le projet d'architecture) si l'on conserve une pratique déterminée (préétablie)»²⁹, cela n'est pas vrai pour l'étudiant - architecte en devenir - qui n'a pas encore une pratique établie car «Bien qu'innécessaires, nous ne pouvons pas oublier que les théories et les explications, quand nous les acceptons, modifient nos modes de pratiquer, de penser, et de réfléchir.»³⁰

L'apprenti à ses débuts ne peut pas se baser sur une quelconque «pratique déterminée du projet qu'il pourrait conserver». En effet, lors de sa formation il est confronté à une suite de modifications de pratiques, qui tendent à la maîtrise d'un savoir-faire (élaborer des projets, les concevoir et les composer). Si nous acceptons ce que l'extrait nous dit, «les théories et les explications nous aident à le faire»; à opérer progressivement ces modifications successives.

Cela est valable pour l'étudiant comme pour l'architecte et le professeur qui veulent améliorer leur pratique; ne pas rester figés dans une «pratique déterminée».

Mais il est vrai que trop souvent les théories enseignées sont des théories normatives qui configurent la pratique selon un certain moule insipide. Ce contre quoi je m'insurge violemment et j'emboîte le pas à Davini lorsqu'elle nous dit que: «Les théories doivent être incorporées comme des instruments conceptuels pour lire la pratique, pour être à leur tour questionnées dans et par la pratique et non pour la configurer.»³¹

Si je vise à accroître l'autonomie de l'étudiant le plus rapidement possible, il me faut les amener à acquérir ces instruments conceptuels leur permettant de porter un regard critique sur leur pratique.

Un second constat, vient de nombreuses observations faites dans de nombreuses facultés ou écoles d'architecture: le potentiel qu'offre l'enseignement du projet est peu ou pas suffisamment exploité. Pour cela, il me faut à nouveau faire une distinction entre deux aspects de la formation projet: La formation au et par le projet.

L'argument légitimement invoqué pour maintenir dans le cursus l'enseignement du projet, ou pour l'y renforcer, est lié à la pratique de l'architecture à laquelle cette formation prépare. Qui, en effet, pourrait contester à un architecte la finalité de produire de l'architecture, de la projeter?

Il est donc normal qu'une formation qui prépare à produire de l'architecture passe par l'enseignement de la démarche qui permet d'y arriver: la «formation au projet».

Celle-ci, considérée comme indispensable, se retrouve dans presque tous les programmes d'enseignement d'architecture du monde. Nécessaire, elle constitue le minimum que l'on puisse attendre d'une école d'architecture digne de ce nom, mais elle ne peut se satisfaire de reproduire une pratique professionnelle, sous peine rapidement être en décalage avec la pratique professionnelle, car aujourd'hui plus que jamais auparavant, notre époque et la société que nous vivons, sont confrontées à des changements qui se produisent en sens divers à un rythme accéléré. Ceux-ci sont tels, qu'il est difficile de percevoir le futur auquel les futurs diplômés seront confrontés, tant sur le plan de la démarche et de l'organisation professionnelle, que sur celui de la vie quotidienne et des modes d'occupation et d'organisation de l'espace.

Pour cela, la constitution d'une «tête bien faite»³² devrait prévaloir celle d'un professionnel prêt à l'emploi incapable de s'adapter à de nouvelles situations.

En général, la prétention de la plupart des écoles d'architecture européennes, en tous cas des

écoles les plus performantes, est de dépasser, après l'avoir assurée, une formation strictement professionnelle. Ces dernières développent, chez ceux qui les fréquentent, des capacités particulières et spécifiques qui vont bien au-delà de la seule maîtrise de la mise en forme d'un programme dans un site donné, et qui sont, semble-t-il, différentes de ce qui se fait dans d'autres disciplines, enseignées dans les universités ou les grandes écoles.

Il y aurait donc dans l'enseignement du projet, quand il est pratiqué dans certaines conditions, une dimension supplémentaire à celle de la «formation au projet», celle qu'avec quelques autres j'appelle la «formation par le projet». Cela peut se faire par une opération^{vi} proche de celle qui est présentée à la figure 13.

Cela mériterait d'y consacrer quelque temps, ne fût-ce que pour répondre au défi qui nous est posé en laissant - comme je l'ai fait pour commencer - la parole au poète:

*«All the past we leave behind,
We debouch upon a newer mightier world, varied world,
Fresh and strong the world we seize, world of labor and the march,
Pioneers ! O pioneers !»*³³

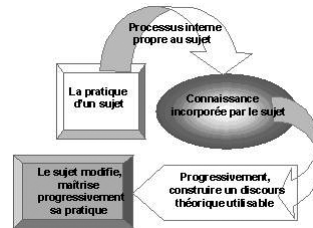


Figure 13

Notes

i J'ai eu la chance de naître en égypte, avant d'aller étudier, pratiquer et enseigner l'architecture en Belgique. Les pyramides, le Nil, 10000 ans de métissages précèdent mon éducation et mes formations successives.

Ma bonne étoile, a permis que ces formations aient comme dénominateur commun la même langue. Je l'ai donc pratiquée dans des contextes différents. J'ai utilisé cette langue interlope pratiquée par la société cairote dans la vie de tous les jours. En même temps au collège je pratiquais celle très châtiée des très catholiques Jésuites français opérant au Caire, comme plus tard au lycée français, j'ai été confronté à celle tout aussi châtiée des très laïcs et francs-maçons professeurs. Enfin je baigne depuis 50 ans dans ce français de Belgique enrichi par des apports nordiques.

Ainsi chez les Jésuites, les idées de Jean-Jacques Rousseau étaient plus acceptables que celles de Voltaire, alors qu'au lycée français c'était l'inverse. Chacun des clans, s'appuyait sur une doctrine. Cependant ma bonne étoile a mis sur mon chemin des professeurs qui, n'étaient pas doctrinaires. Heureuse mobilité d'une institution à une autre qui m'a confronté à des prises de position opposées à propos de mêmes textes. Nous voyant balancer d'un extrême à l'autre, un de ces professeurs nous avaient alors invité à un débat, mais en nous obligeant à préparer nos arguments et à prendre position. «Votre position, nous avaient-ils dit, sera valorisée que par la pertinence et la cohérence de votre argumentation et par votre capacité de les mettre en relation avec les penseurs qui vous ont précédés dans une perspective historique que vous reconstruisez. Vous avez un mois pour coucher sur papier les interventions que vous ferez au cours du débat.»

Cette expérience merveilleuse a certainement influencé ma manière de lire ceux qui m'ont précédé; mon insistance à vérifier si les participants à tout débat qui se veut constructif, s'entendent, comprennent la position de l'autre avant de savoir s'ils sont d'accord sur cette position; l'importance que je donne à la notion de prise de position dans l'esprit nietzschéen; une prise de position qui n'en finit pas de mourir et une position qui n'en finit pas de naître.

ii Il semble cependant que l'association images-mots reste d'actualité pour Libeskind voir <http://www.daniel-libeskind.com/biblio/index.html>.

iii Robert Musil dans «L'homme sans qualité»; comme Aldous Huxley dans «Le meilleur des mondes», posaient déjà le problème du lourd héritage que la Révolution industrielle nous a légué.

iv L'autonomie est «la capacité ou le droit de choisir librement les règles qui nous gouvernent». Elle ne peut être confondue avec l'autarcie qui fonctionne en circuit fermé. Pas plus que la

formation, elle ne peut s'envisager sans échanges entre l'étudiant et l'enseignant, entre étudiants et finalement entre l'étudiant et le monde qui englobe l'institution.

- v De même que biologiquement nous appartenons à un lignage familial, nous appartenons à un lignage intellectuel: ce que nous retenons de ce que nos prédécesseurs ont pensé, dit, écrit, créé... Pour paraphraser Bernard de Chartre, nos formations successives, nos rencontres, nos recherches, le hasard nous ont confrontés à des «géants» sur les épaules desquels nous avons choisi ou non de nous jucher pour voir plus loin. Nous sommes «[...]comme des nains montés sur les épaules de géants, si bien que nous pouvons voir plus de choses qu'eux et des choses plus éloignées, nullement de par l'acuité de notre propre vision, ou la hauteur de notre corps, mais parce que nous sommes soulevés et portés en haut par leur grandeur gigantesque.»
- vi Distinction théorique qui n'existe pas de manière évidente dans la pratique et dont le propos est essentiellement de servir de support à l'entendement d'un phénomène dont la complexité est trop importante pour l'aborder sans un passage par un découpage théorique.
- vii Cette opération est en quelque sorte mon interprétation des idées que D. Schön développe dans: Le professionnel réflexif.

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- 11 <http://www.placeaudeesign.com/sommaire.html>
- 12 LOEWY, Raymond.
- 13 The definition for "method" is: "A means or manner of procedure, especially a regular and systematic way of accomplishing something." Methodology means: "A body of practices, procedures and rules used by those who work in a discipline or engage in an inquiry; a set of working methods" (American Heritage® Dictionary, 2002).
- 14 In http://www.findarticles.com/p/articles/mi_qa3982/is_200401/ai_n9418338#continue
- 15 MAROU, P.; Histoire de l'éducation dans l'antiquité;
- 16 J'ai un jour était sidéré d'apprendre que la législation en vigueur ne me permettait pas de rétribuer à sa juste valeur quelqu'un dont les compétences lui permettait de remplir à la perfection ce qu'il avait à faire parce qu'il n'avait pas le diplôme requis pour cette fonction.
- 17 <http://www.philagora.net/ph-prepa/le-corps/penser-corps4.htm> à quoi je pourrais ajouter l'ex-

trait de ainsi parlait Zarathoustra: «Derrière tes pensées et tes sentiments, mon frère, se tient un puissant maître, un inconnu montreur de route -qui se nomme soi. En ton corps il habite, il est ton corps. [...] Pour lui même le corps créateur créa l'esprit comme une main de son vouloir.» Nietzsche, Ainsi parlait Zarathoustra, Idées/ Gallimard, page 46

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Ideas and Reflections on Architectural Education in Europe: A Workshop Synthesis

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General Observation

The effort to bring together materials such as found in the volume, *Monitoring Architectural Design Education in European Schools of Architecture*, editor: Constantin Spiridonidis, provokes several immediate observations.

The intention of this volume is not to establish a school of thought as much as to aspire to scholarship in teaching.

It is a representation of the diversity of culture within a way of thinking even more than it represents the cutting edge of our discipline.

It is a valuable effort for what it represents, that is, the connection between reflection and teaching.

In an artifact oriented culture, this effort represents the importance of writing and critical role of shared discourse in the evolution and transformation of the discipline of architecture. It is an effort that deserves our appreciation.

Perspectives and Bias

It is important to establish the position of the individual who would make comments as much as it is critical to understand the references of those who have submitted their work for review.

Teacher

As a teacher I have been actively in the classroom for thirty years.

Academic Administrator

I have been an academic administrator as a Department Chair and as a Dean for twenty-seven years.

Architect

As an architect I have worked in the corporate office Of Hugh Stubbins and Associates. I have associated with architectural firms to produce professional services in the area of church work and as a special consultant to universities and cities.

American

The perspective I bring to this meeting is as an American educator in the context of a professional culture that include accountability to professional associations, accreditation agencies and the general public.

Student

I remain a student of architecture. I believe it is the only acceptable posture for an individual who would remain in the academy.

Session Questions

For the sake of Continuity I believe it is fair that I answer the same questions that have been provided for the published papers to establish clearly my position relative to architectural education.

What do I teach and why do I teach in the design course for which I am presently responsible?

My primary teaching assignment is a course under the name Design Thinking. This is a course of my invention that I have evolved over a period of eight years. I chose this subject because of a strong belief that design teaching has given too little attention to specific instruction on the subject of the evolution and implementation of critical thinking skills. This course is specifically prepared for first year design students.

Teaching is a great reminder that it always about people never about the artifacts or the outcome, these things. I believe that through teaching even the ordinary can be made extraordinary.

How do I teach and why do I choose to teach this way in the course for which I am presently responsible?

I teach the first year Design Thinking course in a large lecture format that alternates between formal lectures, a film series illustrating lecture topics, discussion sessions with graduate students following a series of assignments emphasizing reflective writing on subjects related to the lectures, and a project 16 weeks in length that asks the student to build a three dimensional model of his or her own thought process.

I choose this method of instruction so as to mix students of the design disciplines including Architecture, Art and Design, Graphic Design, Industrial Design, and Landscape Architecture together. It also allows me to establish a common framework among the students to form a shared language among them.

The formation of design thought is best exemplified by the thinking eye, that is knowing how to see (sapere vedere) of Leonardo Da Vinci. We are guided by a philosophy of instrumentalism, we learn by doing, there is truth in making (verum ipsum factum).

What exercises do I run and why do I choose to do so in the course for which I am responsible?

I have chosen a mix of assignments including reflective writing, public presentations, shadow activity, and the development of a physical model of thought in order to provoke a reaction in each student as an independent thinker.

Teaching Aspirations

If you aspire to teach individuals to evolve within a design discipline and to fashion a foundation of thought you must consider the mix of inspiration, reflection, critical thought and the desire to effect the work of others. The teacher must look beyond the carefully crafted course outline to the intentions of the course experience. It is therefore the impact on a student's behavior as a designer that I believe is most important to serve a lifetime in the profession of architecture. To this end I expect to influence students and to;

- inspire them to test ideas through action,
- cause them to operate in continual reflection,
- provoke them to value critical thought,
- insist that they become centers of influence.

Review Comments

The comments that follow have been derived from the reading of the text, *Monitoring Architectural Design Education in European Schools of Architecture*, editor: Constantin Spiridonidis.

A Way of Thought

There is strength in the pursuit of first principles promoting education as a way of thinking.

Historic and Civic Conscience

There is strength in the nurturing of a "historic and civic conscience" either overtly as exercises in a greater cultural context or as an underlying expectation for social responsibility.

Teaching as Scholarship

There is emerging strength, though not generally demonstrated, in the concept of teaching itself as scholarship.

Attention to People

There is little attention within the document to either the student represented by many learning styles and the context of their experiences or the faculty matching particular teaching approaches to course assignments.

Errant Voices

There are few errant voices in the document and almost no discourse on departure from long accepted teaching models.

The Case for Research

References to research are generally loose and unsatisfactory.

Attention to Professional Practice

References to architectural practice and professionalism are not convincing and generally devoid of the exigencies of professional conduct and services.

The Voice of the Client

There is little if any reference to those who must be served.

Provocations

The reading of the document has inspired from its various articles three provocations for education and design practice. These provocations will develop and mature with time. It is necessary to consider their implications.

Evidence Based Decisions

Can we assess our teaching pedagogy and our practice culture so as to underpin our discipline with the rigors of evidence?

- Scholarship (Discovery, Integration, Application, Teaching)

- Research

The Winds of Change

What are the forces of evolution and revolution that are upon us?

- Technology

 - Digital Currency

- A Flattened Earth

 - Outsourcing, Offshoring

- A Deeper Understanding of the Human Condition

 - Learning styles, Cultural Diversity

- The Academic Culture

 - Pedagogy and Content, Logistics, Tenure

A Life- Long Commitment

Should we not accept a role as educators beyond what happens within a curriculum for the continual transformation that will be a part of every design professional's life?

- Shepherd the Internship Experience

 - The bridge experience

- Assist Continual Professional Development

 - The learning Organization

- Nurturing Personal Development

 - Connecting personal goals and life-long learning

Challenge: Who will lead architectural education? Who will lead architecture?

This is a moment of great change and transformation in the practice of architecture. A crisis of identity and of service is overturning the conduct of the profession. The culture of practice as we have known it is not only threatened it is essentially past. How much longer can the culture of education hold this evolution and transformation off? Illustrated by the work of students from the Design Thinking course I have referenced I believe we must use the tools that constitute the design process. Deduction, reflection, assumption and preconception begin the process of iteration that serves the development of models to answer the challenge just as it would serve the development of a physical artifact. The question that must be asked as course materials are reviewed is who will lead architectural education? Who will lead the profession of architecture? What implications will such questions have on our understanding of architectural education? We must take the time to deduce the situation before us so that we understand the large picture of our challenge. As the candle burns through the process the difficulties will fall away leaving us with the essence of the issues to be addressed. It is a process that will require patience and discipline.

Deduction

As the candle burns through the process the difficulties will fall away leaving us with the essence of the issues to be addressed. It is a process that will require patience and discipline.



Reflection

We must begin our understanding of what we teach by first reflecting on who we are, who we wish to become and who we are driven to be. The forces in the profession serve a strong notice to us that if we do not respond we will become irrelevant to the future of the profession. The mirror in the fish bowl of water reminds us that how we will see ourselves is entirely dependent on the positions we wish to take.



Assumption

The necessary step of a professional curriculum is that it must embrace and enroll in the culture of the profession that is being served by the curriculum that is being propagated. Too often faculty, in the interest of keeping a distance from external influences, mistakenly adopt a posture of academic freedom as an excuse for a non-responsive posture to professional preparation. As the profession is now transforming at a pace considerably more intense than the academy such a posture only heightens the possibility that formal education experiences will be discounted. The model reminds us that we need to take on the garments of the profession in order



to embrace the value system of the profession. We can not remain aloof to the implications of practice. We must wrap ourselves in the entire culture of the discipline of architecture.

Preconception

Much of what we pursue in curricular matters is the result of what we wish to become. It is our preconceptions that contribute to how we begin to develop curricular paths. Knowing this, we must be conscious of our preconceptions in order to understand our bias. Bias has a major effect on how we perceive the future of architectural education and the relationship between architectural education and the profession. The student who saw the assembly of a chair as a linear activity soon realized that it was the rule by which the chair was assembled that determined the outcome. Each component and related connector becomes as important as the final outcome. This is a lesson well understood for curricular development.



On the Near Horizon: The Learning Organization

The Learning Organization Model is an essential commitment by an office because it signifies a commitment to the pursuit of knowledge and openness to new means and methods. This rapidly evolving aspect of practice is asserting the importance of professional education beyond the boundaries of the academy. We in professional education must address this development. Further, we must be prepared to address the issues of the profession through new techniques and technologies. It is becoming more clear to me that we in education must make a life long commitment to our students and by so doing make a commitment to the profession for total engagement.

It is clear in the professional context that;

employee education is an expensive investment, but it is even more expensive to ignore, every member of an office team must commit to the pursuit of knowledge and life-long learning

education throughout life is as relevant for the most senior member of the firm as for the most junior member of the firm,

moderating what is learned in school and what is applied in practice

is attention to the readiness for practice at every stage of a career

seeking out the horizon for what is evolving is an investment in the future of the firm

The Freeman White Model

The commitment to a learning organization is reflected in the model of continuing learning established by the Charlotte architectural firm of Freeman White architects. This model presents a comprehensive plan for connecting the aspirations of the organization to the capabilities and ambitions of its staff. This model recognizes that it is possible to build future leadership from within the organization.

The first chart demonstrates the comprehensive nature of the courses offered in the Freeman White organization.

Levels of
training
CEU/IDP
coverage
Crosses job
descriptions

[illegible]

**Clear
learning
objective**

**Links to
firm goals**

**Links to
job
descriptions**

FreemanWhite

Clear learning objective

Links to firm goals

**Links to
job
descriptions**

[illegible]

One Teaching Firm's Model

Management

Course Number (Give an Enrich)	Course	Learning Objectives	Gen Eds	First Year	Second Year	Third Year	Fourth Year	Graduate	Professional
D-2	Orientation - LE	To gain a better understanding of LE (Interior, Exterior, etc.)	100	N	N	N	N		
D-3	Orientation - Computer Filing	Learn how to use LE software electronically	100	N	N	N	N		
D-4	Orientation - Hard Copy Filing	Learn how to use LE software manually	100	N	N	N	N		
D-5	Orientation - CAD & QWIP	To be introduced to QWIP (computerized CAD & QWIP) processes and paper flow	100	N	N	N	N		
D-7	Orientation - PDS	To gain knowledge on the progress and use of the PDS	100	N	N	N	N		
Managerial									
M-1a	Negotiating Contracts and Fees, Managing Project Scope	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-1b	Negotiating Consulting Contracts and Fees	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-2	Client Development and Maintenance	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-3	Contracting, Construction, and Management	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-3a	LEAD for Managers	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-4	Business Office, Project Manager Interface	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-5	Quality Management	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
E	M-5a Production Process	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-5b	Project Management / Quality Management / Schedule	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
M-6	Professional Schedule	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		
E	M-7 Leadership	To understand the basic use and use of the contract and the project scope	100	N	N	N	N		

Design

Case Studies

Project Services

Project Management

Marketing

Technical

If we as design educators do not enter into this aspect of the education experience our process will not be regarded as professional education but rather as an applied aspect of a humanities curriculum.

Avoid the temptation to seek a single voice. Demand rigor not a single voice.

Who Shall it be to Lead Architectural Education?

This is a time for bold ideas and voices of exploration. It is a time for the errant voice, the critical eye and the open mind.

This is a time for New Ways!

Chapter 4

Debate

Chaired by

David Willey,
Plymouth School of Architecture and Design
UNITED KINGDOM

Question from the audience

Regarding the reference made to the past with respect to the teaching objectives, the ACSA also has the guidelines or architectural directives that we have in Europe, so could you please clarify what you meant, particularly in terms of your concern with the cultural or identity factor. It seems to me that these guidelines can be quite helpful to us, and I do not see them as a threat to our losing our diversity. However, your opinion was quite definite, so, would you please explain why you feel that way?

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

I said that we were afraid in 1992, '93 and '97 that the guidelines would be a threat, but we are happy to see that this has not in fact been the case.

I expressed some concern around the issue of identity linked to geography or culture, which is a big issue nowadays. In teaching students architecture and urban design, we sometimes enter into what I call "a quick sand area" because we put into the heads of young people the idea that identity is geography or culture, but I am not so sure of this. Identity is one thing -- the fact that we are "multi-identitarian" (multiple identities), yet we accept just one or make one identity more powerful and use it in the wrong sense to suit our purposes. I think that what is important is for me to know who I really am inside, not in reference to geography and culture. Of course, I have a lineage, but that is not my identity. It simply helps me to know myself better. I am an individual that accepts to participate in different groups, which is a role the multi-identitarian plays, and nowadays, with the means of communication available to us, this participation is constantly increasing.

I have been reading about the idea of "glocal", in Spanish, in terms of what it means today. I think it is an interesting word in asking ourselves how we can deal with the double aspect of "globality and locality" which is a problem in architecture, but the "global and local" is also a problem of identity. I believe that we started off being "glocal" as human beings, but through education we were strongly oriented towards one aspect of our multiple identities, as we are lots of things at the same time. But when we want to make a claim, we are partial to one particular identity. This happens when we design, for example, so that if I put on the hat of the pedestrian, cars are awful, but I also have a car, like you, and when as a driver you see a pedestrian in your way, you see the person as an obstacle. Therefore, our perceptions can change within minutes because of our multiple natures, and culture and geography can present problems if we tend to over focus on them.

Marvin Malecha, Raleigh, North Carolina, USA

From my experience, we have the accreditation guidelines for ACSA for any AB National Architectural Accrediting Board, and there are about 37 points that schools have to address. I find that how a school responds is a function of its mentality. For example, a school can take this on as being prescriptive, which determines the behavior and response for each guideline in a class, or a school can take it on as a performance specification and, within their culture, they will address those 37 points. I find that the really good schools almost do not have to pay attention to the 37 guidelines because their own standards and ways of doing things address those 37 points, maybe not linearly, but they address the points. Those schools that choose that maintain their own identity. They maintain who they are about and why they are doing what they are doing. The schools that tend to want to respond line by line are the ones that give up their own identity. Therefore, I think there is definitely merit to having those guidelines and standards, but the school has to have confidence in its way of doing things if it is going to be a good school. Finally, what I would say to you is that there is just enough indication of similarity of ways of doing things in this document that, I think, people should not be paying attention to since it can be negative. Frankly, you do not go far from this document to having everybody thinking alike. It is, actually, a lot closer to everybody thinking alike than being "glocal," as was suggested earlier, because I do not see a different pedagogy operating here.

Tom Jefferies, Manchester, UNITED KINGDOM

This question is directly related to Marvin's presentation regarding the A / F kind of concept, which is an interesting concept, but the question I have is relating A / F to evidence- based assessment and evidence- based decision making. I guess, the latter (evidence-based decision making) obviously gives you a very strong position in an argument. The danger, of course, is that it turns into evidence-based assessment, which tends to concretize endeavor in some way. Could you just elaborate on the tension, I guess, between A / F and the evidence?

Marvin Malecha, Raleigh, North Carolina, USA

I think that A / F is clearly an educational strategy. It is intended to develop an attitude between teacher and student or among students or teachers. The evidence-based is really intended to be working at the advanced levels of the discipline; so, when you are working in a studio, you can work with rigor and certainty on some objects, and you can also identify those places where you can work with rigor and certainty. So, how do you take those chances? It seems to me, you should be as informed, when you are taking a chance, as one can be and know when you are taking a risk. Of course, you cannot always know that, but, at least, when you are in the professional realm, you should be able to do that. However, I would say that the A / F is really what I would call an educational tactic. The evidence-based, design decision-making is what is fed to the process or is in-service to that process, which now defines the relationship between student and teacher. The teacher should be holding the student accountable for rigor, but the student should also hold the teacher accountable for rigor. We have a culture that each lets the other get away with a lot more than they should.

Ambiguity was one of Leonardo Da Vinci's favorite subjects. In fact, he even gave it a name, "sfumato" (to go up in smoke). I do not have anything against ambiguity, but it is the rigor part that you have just identified that I would like to see more of.

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

I demonstrated one use of the word since at the time we were trying to communicate in a certain context, but in another context, I would say that each word is a "jeu" or play on words because of the different meanings or possible interpretations derived from it. This is very useful for the imagination and creativity, so, in another context, I will use words as a pedagogical tool, but not with that rigor or intention of wanting to communicate an idea or define my position in an argument, but as an exercise where we are both engaged in trying to be creative. The game with words is also useful in allowing the passage from one domain to another, sometimes through metaphors or analogies, and this is the creative aspect. What is interesting about using this imagery, at the moment of the exercise or session, is that it provides a universal solution with a context and precise definition.

Koray Gökan, Istanbul, TURKEY

Speaking of words, in the first presentation, there was a point where you talked about a change in society and changing the object of architecture while in the second presentation, we heard about the *transformation* of architecture. Although, I hope that I am not playing too much with words here.

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

I think I should explain what I meant by the *object* of architecture. There seems to be an understanding that the *object* is the building, but I believe that with change, this object of architecture has adopted a wider meaning because we now speak of landscape architecture and urban architecture as opposed to urban design, which were not present before. Such changes in society like density, saturation and extension of the earth have contributed to changing the object, which architecture has had to take into account. If you make a historical comparison, you will

see that some problems were not objects of architecture because of certain features of the given society. The issues of today should be addressed by architecture, and to go back to the first intervention, if we go on doing architecture without the objects of the environment and sustainability, then we are not acting as responsible architects. We need to include this environmental aspect, which in turn changes the object. Therefore, the object changes in accordance with the different issues affecting society. This explanation clarifies what I meant, though I am not sure that it is the same as what Marvin had in mind.

Marvin Malecha, Raleigh, North Carolina, USA

No, but your interpretation follows quite nicely, so, I see it as an extension of the idea about the artifact being important and after that relatively unimportant. What I was implying is that the artifact, to me, is always the result of the process, and where there is great transformation happening is in the way of doing things, the means and methods. In that transformation, there will be the change in the object. Now, buildings will have to be universally accessible, which will change our concept of how that building is entered. Buildings have to be sustainable. I was at a presentation an architect was giving to a client in Raleigh, where he said that he dealt with "determinate indeterminism," meaning that he has to answer the program that will be alive in the building for the first twenty years of its life, and if he makes the building well enough, then, that building will have another one hundred years of life, without him knowing its future use or function. Therefore, the architect has to make a building for "determinate indeterminism."

This changes the process and changes the way of doing some thing which in turn will change it. Therefore, much of what I see is the transformation of the tactics and logistics of architecture, even though I still value the cultural artifact that will send messages. So, this is where we come up against each other very well with Jean Francois's broader or global definition, and with mine being more a question of: "how do you make the thing?" or "how do you get there?" and "how do you make the decisions leading you along the path?" This is where I see great revolution and transformation.

Koray Gökan, Istanbul, TURKEY

So, it is not the architecture which is being transformed, but it is the product we are talking about.

Marvin Malecha, Raleigh, North Carolina, USA

Well, ultimately, the architecture, of course. The best way to explain this is through what I tell students, which is that there is no such thing as a neutral computer program. The moment you go into a computer program and start to design a building, using a software package, you are accepting a way of thinking and decision making that will influence the outcome; so, my view is that we should be very high-touch relative to that decision process, whatever it may be or however we want to define it. If we take Jean Francois' presentation and embrace it, that will cause the building to be different. It will cause the urban design context, if we think about it in those terms, to be different, and it will make spaces for our time and place.

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

Also, you cannot disassociate the second definition from the first. Finally, the ultimate aim is to create a certain order, but not in a military sense. This means that you have a fantastic studio where exercises can be done in terms of what is order, pattern and structure, etc. When you have or see a pattern or structure you recognize things. The object is what you apply something to. Therefore the order or element to which you apply the order is not the same as that of the Egyptian times or what has existed till now because it is a social factor influenced by changes in society.

Vana Tentokali, Thessaloniki, GREECE

I have a lot of questions on the presentations, but I will resist the temptation of asking them since I need more time for reflection. You have presented a new era in which the school, as an educational institution, is replaced by the enterprise, but I do not want to become like the human being who lived in England during the Industrial Revolution who wanted to earnestly destroy machines. I believe that we need to think seriously about all this. So, my question to the first presenter and, I will now ask, you, Jean Francois, my question. As far as I understood your presentation, considering that I was late, I should mention that I greatly appreciated the fact that it had a strong pedagogical background.

Also, you tried to avoid presenting definitions of culture, although towards the end you did provide one, to which I would like to add another one, and this definition of culture comes from Gramsci who stated that "culture is the self-discipline of the inner ego." When you referred to students you claimed that you try to activate or bring forth their creativity, etc, and, of course, I agree with you on that point. But, I wonder, what would you suggest we advise our students to do, would you say that they should maximize or minimize their own self-discipline or inner ego in the case where they come from different backgrounds and education? I agree that secondary schools are not the best examples of environments that develop creative students. However, my question is, what do you do with your students' self-discipline or egos; do you suppress or allow that to flourish?

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

I am not sure that I have understood your question or opposing stance very well. The two definitions I gave, one being culture as a set of knowledge linked to the idea of what is useful for a person to think, judge, assess and develop one's tastes. The second definition was the discipline to develop certain abilities. If I link this to autonomy, I have to show the person who I am, as means of setting an example, not for the person to follow, but as a way of making the person consciously aware of some characteristic or quality that lies within his or her own person and allow that to surface. Therefore, this does not mean that I promote mine and suppress the other person's characteristics.

Now, if I had had more time in the presentation, I would have added the idea of solidarity in the class. I see the students as individuals, but also as a group, with two types of tasks. The individual, at some point needs some kind of relationship, but the main element is the group. I can consider the group as passive, but that does not mean that they do not work together if I have not assigned them an exercise as team work. They are still considered to be a group I can also divide the group and get them to do team work. In this case, I need to reflect on what "team" means. In any case, I think we should promote solidarity, and Marvin mentioned, marvelously, how students influence one another; thus, solidarity needs to be learned. Each person is autonomous and has to elaborate one's own position and present it to another and so forth – this is our situation, where we learn from each other and not just from the teacher. That is important, so I do not focus on the actions of the individual as such because the person has to develop his /her own personality and that is solidarity in the group. This, however, always requires more time.

David Willey, Plymouth, UNITED KINGDOM

There was a little provocation to Marvin, at the beginning, about the nature of the future look at the end of the world. I think the technical term for those 19th century people was the Luddite, which is a very nice word.

Marvin Malecha, Raleigh, North Carolina, USA

I do not think that our colleague was referring to herself as a Luddite, who resisted technology and weaving machines. I must admit that I do not feel comfortable with what is happening either because of the fact that it threatens everything. What I see is that we have fallen into a pattern of doing things, and what I think we need to do which would bring an amazing amount of energy is for us to lean back and say "Let's try new ways of teaching." "Let's see if there are better vehi-

cles of delivering this information." "What is this new technology offering us?" We had a graphic design studio in the College last year where the instructor was in London. He never came to the United States; he taught the whole class from London. The students loved it and they all went on a summer trip to London and visited the tutor's office. It was marvelous! They met one day a week and they would web cast and it was just a wonderful experience.

So, basically what I am saying is that although I do not know where it is going, I want to go on the voyage, despite the fact that I may not be that comfortable with it. However, I think that there is great opportunity for us to maintain our position as educators and take the position Jean Francois has taken if we become more involved in the three-year period after conventional graduation. In fact, we can look at that two- or three-year period when students are becoming professionals, and completely vest ourselves there and deal with the issue of professionalism and professional behavior, because we have the opportunity in our structure to deal with the larger value system that Jean Francois mentioned. Right now, we are not doing or conveying any of that; we are merely turning them loose, whereas, I see that as a period of great opportunity to actually do a different kind of teaching with different kinds of instructors. In many ways it is like putting your hand in a black box without knowing what is inside. I appreciate your nervousness and am right there with you!

Josep Muntañola, Barcelona, SPAIN

With regards to Mabardi's lecture, I agree with almost everything, such as his definition of architecture and the main points on the new technologies and organization of the professions. Speaking of the new technologies, I participate in a European program in which 30 universities are trying to teach design on line, which is a big development. Also, as far as building documentation is concerned, this has failed so far since in Europe it is extremely difficult and complicated to approve a system for official documents. Nevertheless, efforts are being made and I have attended meetings for this purpose.

Marvin Malecha, Raleigh, North Carolina, USA

I think the point you are making is an extremely good one. In my work with the large firms, the really good offices say that the first characteristic of an individual that they want to hire relates to what they refer to as "intellectual agility" which means people that can move from one place to the other and do it intelligently, people who embrace new ways of doing things, new technologies and can move across disciplines. In fact, one individual calls these people, "cross-over artists," that is, people who are comfortable in a room full of politicians, can interact with the engineers, etc. These are the people they need vitally to lead their teams. So, you are absolutely right and also very correct in saying that each part of the world will have to figure out how they are to interact with each other with these new technologies.

Again, technology is simply a series of opportunities, and the hardest thing is to get people who have become comfortable and powerful in their subject matter to let go of their comfort and their power. I always say -- and this is a criticism that I have of American universities, without of course implying that your schools have this problem -- that I refer to the typical curriculum inside an American university as a peace treaty. Among powerful factions of the university there is a peace treaty, where there are so many units of general education and that is negotiated with the engineers, who being more powerful have less liberal education, even though it may not serve their interest in the long term, but they have control over a greater percentage of the curriculum.

You have so many units of design studio because it is controlled by the practicing design faculty. The poor historian has got to cover 4,000 years of history in a 3-unit class. You get more credit to teach design studio than a lecture studio. Why is that? When you take a look at true grading of papers in history, that is, if you want your students to learn to write, which, by the way, is another requirement sought after by employers, I remember being very impressed with Ken Frampton I was with on the accreditation team at Columbia. The students would write in their

blue book on the right-hand side and Frampton would respond by writing more than the student had written on the left-hand side. Now, that was amazing, and yet in that structure the studio instructor got more teaching credit for teaching the studio than teaching a seminar. Therefore, I just think that if there is anything we can do here in a sophisticated, collegial way, it is to undo some of the peace treaties.

Loughlin Kealy, Dublin, IRELAND

Is pedagogy to be taken seriously? If we are going to take this seriously, how is this to be done? You could say, a workshop like this, is a beginning, but where do we go from here? What sort of dialogue should we actually try to have? In a way, the first book that was circulated here, to what extent was that a proposition as to how that should be done? Actually, you could treat it as a hypothesis that if you got people to describe what they taught and how they taught it, illustrate it with exercises and so on, that it would move the discussion on. One could respond positively to this and say that it is true. My feeling was that there were several missing pieces. I think the quality of critical reflection was missing to a large extent and the student voice was diminished [.....] I have a question that I would like to ask the panel. The people that I get to teach design in my school are people who I know are engaged in critical practice. What is critical practice in teaching and what do you understand that to mean? Can we move that on and how? I suppose that underneath that is the conviction, and if you like, I would appreciate having everyone's reflection on this, that is, my instinct is that unless we come to some understanding that we are actually disabling ourselves by teaching inefficiently, a lot of the times, and, sometimes, very [.....] not realizing how much we have to offer to other people and not being in a position to offer it very [.....] because we have not thought about it in that way. So, my question is, with this as beginning, how do we move on?

Marvin Malecha, Raleigh, North Carolina, USA

I think what it amounts to is a person who writes on creativity in business management, Tom Peters, and his recent book, "Re-imagine" is one that I like very much. What he says is that you have to choose some champions, those are the risk takers on your faculty. You have to give those people the room to get something accomplished and then you have to use their successes or failures as examples to encourage new champions, and that you have to operate within the realm of encouraging people to step forward. I am a firm believer that this is the way to make change happen.

As a community of teachers you have to do this, but then take on a very specific strategy to ensure that the people who do this also have the opportunities to make presentations and make them in front of people who are experienced. Then the results of those interactions are published. So, it is the people who do the writing, presenting and reacting that become the champions. I think you have to build that culture into the discourse of an organization like EAE or ENHSA, but, ultimately, it comes back to people and those that are willing to take the leap off the cliff in order to do this. I really do not know of any other way.

Jean François Mabardi, Louvain – La Neuve, BELGIUM

I think I spotted (diagnosed) one or two diseases in architecture education. I will mention just one – the syndrome of specificity that will kill us – and as a remedy, we must open our windows and doors. We are talking about education and we have fantastic educators who think about education, not about architecture. Where are they? When consulting them, my plea is not for you to do as they say, but I would urge you to just listen and get what you want from them, but confront yourself with the best.

We know that we survive because we are enthusiasts and real people in the studio, and that makes a big difference even with a lot of scale in pedagogy. However, I would urge you to listen to the person who is the best in the field, and the different voices in that field, and extract what is better or more useful or helpful to you. This must not be perceived as following their rules of

pedagogy, but they do offer some principles which deserve our attention, so, let us listen to them and hear what they have to say. Therefore, let's leave ourselves open and not shut ourselves off from other disciplines on the pretext that ours is a specific or even special field. We should communicate and be communicative with other schools and faculties. After all, we lost a battle in the 19th century with the engineers because of our overprotective attitude towards our profession. All this, however, has to do with mentality, and if we can change this mentality among us, I think, it will be fantastic.

By the way, did we ever invite an engineer to talk about education through this Association? I, frankly, cannot remember. We are collectively to blame for our specificity syndrome!

Emel Aközer, Ankara, TURKEY

This is just an expression of excitement [.....] regarding the norms and this is quite significant for me because I could only grasp this really significant distinction after reading Lawrence Koverse [.....] and only then could I understand the difference between principles and diversity of cultures [.....]. I firmly believe that we need to go beyond these cultural normative systems [.....] in order to appreciate these cultural normative systems themselves [.....]. This is very difficult and a challenge to be educated in the cultural normative system of architecture itself. Perhaps there is no traditional architecture, but you have just talked about the discourse in architectural schools, and this is quite common for us. Would you please further elaborate on the ethical aspect of urban design and architectural design education because, for me, this is more important than the technical material or the cultural normative or the political ideology or legal dimensions since the teaching form can be built only on this basis?

Jean François Mabardi, Louvain-la-Neuve, BELGIUM

As far as how culture influences us in the normative manner, that is a difficult issue that requires lengthy research and I am not so sure that I can provide a quick answer to that since it requires reflection; nevertheless, I will try. I think that if you try to be honest with yourself in the search for who you are, will you be able to escape ideology? Perhaps, but it gets slightly more complicated than that because you will have to move into reason, ratio and emotion, the emotional reaction and rational one. Where is the balance? If you go too far into the ratio, you can rationalize that, but when you act, you will not be in coherence. But, the question of how to tackle the normative aspect of culture is a function of being conscious of what you are and not letting that slip into the subconscious. This consciousness involves recognizing that an architect is a mercenary, and although schools of architecture do not want to accept this, in the end, the professional will work for who pays and this is a reality that has existed since the beginning of times, whether we admit it or not.

David Willey, Plymouth, UNITED KINGDOM

I will ask Marvin to talk briefly about some of the issues I have underlined from your questions, this morning regarding the nature of change and what we are doing in terms of our teaching, and then we will draw our discussion, unfortunately, to a halt.

Marvin Malecha, Raleigh, North Carolina, USA

As far as the nature of change, as I mentioned earlier, change is happening and will continue to happen in the direction we have been discussing. Jean Francois is right in saying that architecture as a discipline or profession has always been in service at various times in its history to larger and smaller groups of people, but always to somebody who pays. There is a wonderful story from the book called, "The Feud that Sparked the Renaissance," which is the feud between Alberti and Brunelleschi in the way each could or could not manage their money or client, and many people say that it is in that feud that modern practice was born.

We know that change is always with us; it is proven. L'Ecole des Beaux-Arts and its practices in

drawing the profile of a building as opposed to the details of a building, and interacting with the trades in a particular way versus what we now see, where everything comes out of Frank Gehry's office completely knitted together. So you have a cultural normative standard operating in both situations. That is why I like to talk about transformation and evolution, and you can talk about revolution as well. Thomas Jefferson said, after he got done leading a revolution, "A little bit of revolution is a good thing for every generation." I think that is the reason I am a great admirer of his work and why I am intellectually comfortable with a bit of revolution in every generation.

This is getting at what you are talking about because it is challenging normative standards for ourselves. Rene Descartes also said more or less the same thing in stating that we should not accept anything as true unless you, yourself, can prove it as true, which brings us back to evidence-based decision making. Therefore, the university's role in that is a very interesting one and it is full of tension. Why? Because on the one hand, we have design professionals that are changing so quickly because their clients are changing, the money is moving and they are moving with it. On the other hand, we have all of the cultural tradition, the discipline of architecture to bring along, and we have young people entering the field that want to become leading practitioners, but who may have never been to a major city. I am not saying that this is true, but it is possible for someone to grow up on the island of Crete, decide to study architecture, but never yet been to Athens. So, if you are teaching in the school, here, one of the first tasks for those young people is to get them to Athens.

Now, that is a long way down from the kind of discourse we have had this morning because, first of all, unbelievably, they may not have even been on a big boat. I can tell you that in North Carolina, we have students who come to us as freshman, very bright young people, who have never been to Raleigh, North Carolina, let alone New York City or Chicago. They have grown up in towns of 500 to a 1,000 people and they may have seen specials on television about architecture. So, we have to bring these people along, and this is one of the fundamental responsibilities we have. Since we are a land-grant institution, we have a responsibility to the greater society of North Carolina. Prof. Macchi Cassia talked about the responsibility of the university to be a voice in that evolution of society.

So, all of that comes along and we have an incredible tension inside our faculties. One such tension is to preserve and transmit the legacies of culture, because if we do not do it, then nobody else will, therefore, it is our responsibility. On the other hand, we have to prepare people to be agile in their learning style because the normative standards are changing and we are in this tension, which is why I like being in university – it is much more fun. In practice the rules are simple. You get the job, and everything comes from that.

Chapter 5

Closing debate

Panel

Constantin Spiridonidis
Jean François Mabardi
Per Olaf Fjeld
Marvin Malecha
David Willey

Constantin Spiridonidis, Thessaloniki, GREECE

It seems appropriate at this point for us to circumscribe or try to make an outline, assuming, of course, that these meetings will continue in the future, if we agree that they should. On this basis, the first question we should consider is whether we feel there is a need to continue with this effort or is this meeting a culmination point? In case we feel there are reasons for us to pursue another project, then, what will this be and how will we go about achieving it?

As far as I am concerned, I do not have a precise idea in mind, at the moment, of how we should proceed, but, of course, eventually proposals will be made. I would, actually, like to open the discussion, firstly by asking our guests, who were invited to read the books presented here and who were asked to present or introduce a number of related issues, and, secondly, by asking the rest of the audience, who heard the presentations and reacted through the debates and discussions on issues concerning architectural and urban design education.

There is one last remark I would like to make with regards to something I was hoping we would avoid, and which, I think, we managed to successfully do. I must confess that this is the first time in my 15 years of experience with such meetings that we have managed, for two days, to concentrate our discussion on education rather than on the nature of architecture or design and, as far as I am concerned, this is quite an achievement. In my opinion, in order for us to maintain this level of discussion and raise it to new heights, we should aim at keeping our focus on education rather than on defining architecture.

In previous experiences, although all these discussions and debates had education as a main objective, within the first ten minutes of the discussion, the topic would change to defining architecture, and as there were as many definitions and conflicting views as the number of participants, it used to be very difficult to move on or arrive at any satisfactory conclusions. Therefore, experience has shown us that as architectural educators we are better off talking about education rather than architecture. In view of that, I would now like to hear from you in terms of your personal hunches and reactions from what you have experienced during the past two or three days and, subsequently, hear your proposals.

Christian Huetz, Regensburg, GERMANY

First of all, I would like to express my thanks to Constantin for having made a very good selection of panelists, and I greatly appreciate the work involved. It seems to me that this is only the beginning and this was evident when we had to repeatedly resort to interrupting our discussions due to time constraints, thus suggesting that there is a lot more for us to talk about and a lot more to be done. Personally, I feel that more should be done, despite the fact that, at the moment, we cannot specify how this can be done. I found it very interesting to talk about teaching architecture and feel quite strongly that we should carry on, even if in the context of a forum.

As far as the issue of architecture and teaching is concerned, I think that our discussion on teaching should be carried on. I have found that even with the large diversity of cultural and geographical backgrounds there could be some principles of teaching that are not contingent on cultural background that can be very interesting. We can have workshops anywhere, consisting of students and teachers that are multicultural. In fact, I had one here that proved to be interesting along with the workshop conducted by Aarhus. Therefore, I would simply suggest that we go on.

Hernan Marchant, Santiago, CHILE

First of all, I would also like to express my thanks to Constantin for giving me the opportunity of being here, in such a nice place, and taking part in such a fine discussion on the teaching of architecture. I come from Chile, which is very far and this morning I was looking at Marvin Malecha who comes from the States, I am in Hania with Jean Francois and it seemed as if we are with Santiago in a big triangle in this flat earth. Since I come from a continent that is used to trying to get the best of two worlds, looking towards North America and Europe in an effort to extract what we can from them; so, this is exactly what I have been trying to do here.

When I look in the mirror, I cannot say what the panorama of Europe is, but I can say that at least in Chile, we have not done a lot of the work that I think needs to be done in teaching. I will discuss this in accordance with what has been mentioned here. The first thing we have not done very well is the crossover between being an architect and teacher, which is a very important issue that we need to recognize and find a way to concentrate our efforts on teaching rather than being an architect that teaches architecture.

The second point has much to do with research on teaching, centered around architecture, once we assume that we have to be first of all teachers. This is important in view of the way architects are trying to work today with new technologies, as mentioned by two of our speakers. I think that this is a major issue, and we have not progressed much in this area in teaching because we do not use all the computer systems available to the common people. For example, we do not use enough communication systems, such as email, video conferencing and e-learning. There are a lot of instruments that could be used at a basic level by everyone, but where there is room for reflection is how we could really use new technologies in learning, going beyond the normal functions these instruments were normally designed for. For example there are instruments designed for drawing and communicating, but for teaching there is no software. In other words, not much thought has been given to what can be done with technology in teaching. Nevertheless, there is much to be done in this area; consequently, we must all face the challenge.

Ali Uyanik, Aarhus, DENMARK

The last two and a half days reminds me of a movie where a Samurai goes through a forest, where he gets killed, his wife gets raped and his sword disappears. These events are followed by a series of stories told by each of the characters, so that the dead Samurai tells a story, the raped woman, the offender, ending with the eye witness who happens to have stolen the sword and so on and so forth. So, in comparing the variety the movie provides with this experience of reading the same type of texts, I can say that with each text we are presented with a different story. This is wonderful, and we can all go home feeling considerably enriched.

However, the fact remains that there is a reality in our school, back home, that burdens me. In Aarhus we have thoroughly applied the stipulations made at the Bologna Convention, which have large-scale implications on the education of architects, especially because the existing framework of teaching is completely different. As a result of this, students are now moving around Europe a lot, which means that we see students only one semester at a time or even for just one semester, and the next time you see the student again, it is for a thesis' program. Consequently, the feeling of continuity between and among students and staff is getting lost. Despite the fact that these changes do have their positive side, they have a large-scale impact, and we do not know where all this will lead us and how we should use it positively. I would really appreciate hearing a response from you because, so far, we have looked at this new situation mainly from a negative perspective.

Constantin Spiridonidis, Thessaloniki, GREECE

As you know, all these initiatives that we have undertaken in the framework of our thematic networks have in the background the fundamental question of what we are to do in facing the new European policies concerning higher education, in general. The reason we are here is to establish among ourselves a system of dialogue and communication in order to better organize ourselves as schools and as teachers. With respect to this new situation, even if this debate takes place in the framework of the Meetings of Heads of Schools, I would like to mention, that many schools are already in this new system while there are many that are not. From those that are not, there is a large number that want to or are ready to become part of this new system, but there are also others that have opted out. The question is how will we react or organize ourselves in order to continue to offer quality education in either system?

It is possible that there might be other schools that have opted out of this system, as is the case with Portugal or Romania that have taken an official stance on this. We may ask ourselves whether we consider the systems to be innocent and without objectives. The answer is probably not,

because systems have their own objectives and strategies. Our role, then, is to gain a better understanding of where we are and where we are going. Moreover, what is expected of these discussions is to answer the basic questions and provide opportunities for us to stay together.

The experience we gain through that leaves two basic issues that I would very much want to save, with the first being pluralism, which is our richness and at the forefront of issues to be safeguarded in the face of any compromises to be made for the sake of unity and common policies. Pluralism is the essence of our discussions and our work; therefore, it is essential that we find mechanisms to protect it. Europe's environment is multicultural which explains the different views and considerations about education, culture and architecture, and this heritage should be protected. The meetings that we organize do not aim at homogenizing our educational systems or contents, but mainly to sustain or maintain diversity, which in fact, represents the ethical attitude of the Network. This Network does not want to promote or be partial to any particular aspect of architectural education. On the contrary, we want this Network to be a supportive environment for change and changing trends, underpinned with a deep sense of conservation of diversity, in addition to supporting our education.

Along this line, I would like to refer to a remark made by Christian Huetz, which is strongly related to what Marvin Malecha also mentioned. That is, we must remain in the axis of educating architects and not just training them, and this can be a common ground for us to construct our future activities. I must apologize for being so lengthy, but Ali's remarks gave me the opportunity once again to define the ethical framework of these events, including ENHSA and EAAE as well as the student workshops, which are all activities involving the collection and diffusion of information as a means of our getting to know each other through others.

Cesare Macchi Cassia, Milan, ITALY

Perhaps it could be possible to extend our discussion on architectural education in order to create places and occasions to teach and talk about the quality of architecture. This involves talking about the cultural value of the profession, which has been an historical presence in the discussion on the quality of architecture. Moreover, we could enter into a discussion on the cultural role of our clients, as well as discussing the private and public commitments of society on the whole. Fillarete said that if the mother of architecture is the architect, the father is the client. In this way, we can finally arrive at our discussion on the two aspects of architecture, teaching and design. Another possibility would be for us to discuss altogether and in a more in-depth manner the methods and results of our teaching while also speaking with the best of our students and illustrating designs in the form of a seminar.

Josep Muntanola, Barcelona, SPAIN

I believe that we now know far more about the situation in Europe in terms of architecture and design education than ever before, and that it is important that we continue to explore the area through the book and discussions. Despite the difficulties encountered in the subject matter, what I have found interesting is learning about what is happening in the different schools and the various perceptions of problems faced. The question to deal with is how to proceed from now on, whether to continue in the same way, etc.

In relation to what Prof. Cassia suggested, I think we could have thematic platforms for discussion, with one person as coordinator and a series of two or three experienced teachers from a school or outside the school with knowledge on teaching, technology, how to use technology in different teaching situations/ courses or even how it can be related to research. This expertise can be both from the academic and / or professional worlds in an attempt to bridge certain gaps or facilitate processes, but we should always ensure that our discussion is predominantly on education. In other words, the themes should be on architecture education and technology, etc. and not deviate by talking about other subjects. I think that there are experiences, for example, that can help us see the point of view of a student or make us see how something works or how it can potentially work in the future.

Another possibility, of course, is to resort to more abstract and theoretical issues like some of the issues that have been addressed here, such as methodologies, effective means of communication, and competences in architecture, which can all be presented through comparative case studies, and through this cooperation can emerge a wealth of new ideas, without undermining the importance of arriving at an optimal or more viable ways of teaching.

Therefore, I would suggest and encourage such platforms of encounters, whereby in an effort to arrive at specificity, we explore the whole gamut of complexity within the educational domain. Moreover, there is also that whole question regarding the research and professional matter that should, naturally, be included as part and parcel of the educational process, otherwise we will fall into the trap of repeating what we aim to avoid in such meetings.

Loughlin Kealy, Dublin, IRELAND

It struck me and became quite clear as we were speaking yesterday afternoon and this morning that there were a few things we were aware we could not address very effectively. So, I thought of putting forward the idea of dialogues. Certainly, if we start with the idea that we are ultimately heading towards some competences for people, it seems to me that there needs to be some student-teacher dialogue that will have to be developed, in terms of teachers exposing their intentions, their materials or pedagogies, etc, and, somehow, find some type of reflection, coming from a student that has gone through that process and to do that in a fairly structured way, so that we have a reporting and reviewing system of that, in order to capture that set of experiences, as I think we need to actually capture what we are doing in these situations very effectively.

The second suggestion, which I think is very important, has already been referred to, which is the teacher / peer review / senior-academic commentary. It emerged in some other dialogue, yesterday afternoon, and although it was quite short and difficult to capture what it meant, it did offer an intriguing possibility in terms of where we might go. There was another set, which I do not know how we would do, but I would be very interested in hearing from the perspective of professional foresight, and I am not talking about the profession as a consumer, here, but really talking about people who are seriously reflecting about the profession and looking at the pedagogies and competences that we are trying to instill, and if there is some type of reflection that could come from that.

I suppose the one that is left almost to the end is the client-user question, which again I have referred to and touched on as somebody mediated between what we do as a profession, etc. At the end, as I said to people before, most clients do not want buildings, but facilities in which they can live properly and carry out their work. At a certain point, we achieve art at the highest level of our craft, but there is a demand, which comes with the ability to respond to need, which sometimes gets suppressed when we talk about competences. This refers to the ability to be able to listen, absorb information and actually give effect. There is lots of information out there that I do not think we work on very well.

The final suggestion I want to make is one that people have mentioned repeatedly, and not knowing how we can advance it, I will just put it out again: It's this question of technology and learning. This morning I asked the question: is pedagogy important? Do we actually take it seriously? If so, what do we mean by serious pedagogy? The old chestnut that we all talk about is the transition between manual and digital, and we have positions on this which are certainly not informed by any great research, suggesting that there are always losses as well as gains. How important is this fact? How do we capture all this? That's the question on my mind.

Having opened up these windows and doors, which we all know are already there, is there some way we can put this back on your table and Constantin say that your ingenuity can come up with another formula that can take it forward. I am also very conscious of the fact that at the Heads Meeting, they "occupy a different planet", but this is an issue we have already touched upon.

Luis Conceicao, Lisbon, PORTUGAL

I have been very quiet over the last three days, and I have been thinking about all this brainstorming on what to do next. As I have been talking to different people during the coffee breaks and at lunch and dinner times, it seems that what is common in Europe is that most of the architecture being made is not made by architects. In fact, Loughlin Kealy referred to that earlier.

The second point is that the profession is changing because the world is changing and the quality and quantity of information and the tools that we use to transmit and transfer information are changing as well. In response to this, Marvin suggested "flattening". Nevertheless, this is a reality we need to face in the years ahead.

The third point is that we, speaking for myself and my generation in Portugal, have a certain idea or image of what architecture is, what an architect is and what architectural education is, which are also changing. I studied at the School of Fine Arts, which included painting, sculpture and so on, following the French tradition. About 18 or 20 years ago, we entered university, under a different system and regulations, meaning that architectural education is not exclusively prone or inclined to making regular mason architects. There is also university formation, which means that architects coming out of university are not necessarily professionals. I believe that only 20 or 30% of the architects coming out of university will really do architecture.

Therefore, we have to think of architecture as a culture or something else lying within the university system, that is, a wide range of knowledge that goes beyond building or urban design, which we should talk about because it is beginning to stress me and some of my colleagues as professors or architectural educators, if you like. The question to consider is how to train our students beyond the normal education of the architect in order to create a culture that will spread over societies and communities, offering the highest standards of services. After all, 30 years ago in Portugal you would not call an architect to redo the bathroom, as is the case today with those that can afford the service. This means that, culturally, the community is beginning to look at us in a different way, that is, along the line of the carpenter, plumber, etc. On the other hand, the virtual space and culture that architects are part of goes beyond the glossy magazines and star system, as we start seeing the architects Marvin referred to as selling windows, construction equipment and materials, etc. Finally, as teachers and educators, we should try to widen the field of the profession.

Tom Jefferies, Manchester, UNITED KINGDOM

One of the things that is noticeable and which can become explicit in the way the publications are handled, whether that is implicit or explicit, is that there is some kind of defensiveness, at some level, about what architecture is, and I wonder if that is actually necessary. There is a big discourse on culture, but such discourse is impossible to resolve because culture is always moving, which I think is a good thing since things should be ambiguous. There is also a kind of tension between the idea of professional competences and the wider, ethereal thing called architecture, and whether it needs defending or not is a question in the light of reality.

The interesting aspect of the conference, for me, is that it has made evident the fact that there is a lot of thinking behind architectural education, and it varies and the variation is the idea of plurality, which I fully support. Surely, I do not want to be the same as everybody else, but I want to be talking roughly about the same thing, so as to understand where everybody is coming from, and then have interesting discourse.

Urban design seems slightly more ambiguous in terms of its definition, and I think it would be very interesting to set up a comparative discourse which would take urban design as a kind of field and look at the comparative approaches to the subject from the perspective of architecture, on the one hand, and planning, on the other, because there is a significant cultural divergence about what the subjects actually involve, but, in my experience, it wants the two sides to start talking to each other in a rich, collaborative way in which the divergence quickly disappears, and it becomes a syllogistic situation.

What I would take away from this gathering is that, potentially, there is the opportunity to maxi-

mize interdisciplinary discourse if architecture, as a subject, has the "bottle" (the bravery, the fortitude) to take it on. I agree with Marvin who said in the previous session that there needs to be this attitude of a bunch of committed, intelligent, motivated people as a community, a world. We have enough to offer in discourse with other disciplines to actually make the most of our unique position rather than turning it into an introverted discussion about how many angels you can get on the head of a pin and whether this applies to architecture or not! I guess all I could say to that is that I do not believe in angels, but do believe in pins.

The great thing about traveling abroad is that I get a chance to see some really weird telly (television). This morning, I saw "Postman Pat", a children's programme translated into Greek, and it was fantastic! On another occasion, I saw an American business programme, despite the fact that I do not watch American business programmes, but there was the Chairman of who said "luck is where preparation meets opportunity." I think that architecture as a profession has the ability to set itself up and maximize its opportunities, and this is what we should be doing rather than worrying too hard about ethereal issues since these will happen anyway. Punk rock happened when people realized you did not have to learn to play the guitar to be good!

Christian Huetz, Regensburg, GERMANY

A quote from Alison Smithson has just come to mind, "We never design", and she said that as an architect, which kind of bothered me. Anyway, Luis was pointing out the problems we have that we can discuss. I was very disturbed about changes in teaching under the terms of the Bologna proceedings in the background, and I think we should deal with the matter of what teaching means under these terms. In my opinion, it is not very useful to raise new questions, but we should think about what to do, when this is to be done, and how it will be done. Luis also pointed out that our profession is changing, the Bologna proceedings is changing our teaching, the frames and conditions are changing what architecture has done; however, all that does not change the need for us to think about our teaching and how we can react by teaching, in a non- traditional way, as Marvin pointed out. I have found a way that I believe Jean Francois mentioned, which suggested that we increase student autonomy step-by-step. When students have autonomy, they can react to the unknown or whatever lies ahead without having anyone stand over their heads. I consider that to be a very important point you mentioned!

Julian Keppl, Bratislava, SLOVAK REPUBLIC

I would like to thank mainly the organizers for preparing such a brilliant workshop. I am very pleased to have had this opportunity to be here and listen to such excellent reviews of the book and wish to thank you for preparing those two books. I think that both as professionals and teachers, we need work with precedence and I consider those two books as a collection of precedence, giving us new ideas and inspiration. Moreover, it provides evidence of our teaching for us to reflect on in assessing what we do well and what needs to be corrected. I believe it is a process worth continuing and hope that we will meet again and talk about those issues we have in common, as well as the serious problems concerning our profession, both as architects and educators.

Simon Beeson, Edinburgh, UNITED KINGDOM

A couple of things, but firstly, could everyone who contributed to the book please stand up. To extend that thank you, I would like to say that when you give a paper at a conference, usually, you do not really get what you said discussed. Let's face it, there is never enough time, nobody discusses what you said, they discuss what they came there to say, and it is a real privilege for all of us to have so many people discuss, not only our individual contributions, but the book as a serious piece of work. I have found the last few days incredibly useful in understanding the context of what I do, and I think that is where the monitoring exercises really begin, it is the question of the context in which we are working, not a paradigm or any great rules, but the context in which we work.

The second thing is that I think I should extend a thank you to Crete and to Greece, in fact quite an old thank you, of some 4,000 years, and in the tradition of most teachers since Socrates, I suppose I have grown up with teachers telling me stories and fables, which are always a far more useful way of getting at a problem than to talk about the problem. I have two little stories:

The first I hear when I go to the Fringe Festival in Edinburgh. There is a group called the "Chipolatas" (frankfurters or spicy sausages) that comes from Australia and perform mostly for children, doing juggling, etc, but in the middle of that performance, they tell a story where two members of the group stand in the middle of the floor with a narrator, who says that there are two men. (Could I have two volunteers with my colleague from Plymouth?) So, the two men stand in a field, perhaps an island, and one man says, "This land is my land." The other man says, "No, this land is my land." The other refuses to accept the claim and the two men argue back and forth until a wise, old lady comes along and puts her ear to the ground, listens to them arguing and says, "Be quiet!" "The land says, 'You belong to me'."

As a teacher, you get some very good experiences from students, and this recurring theme of how the voice of the student comes through is one of the things that we have to look at in the next process. I have one little story that usually reduces me to tears. It is when the student has really gotten to you and you know you have both done something wrong or otherwise learnt something profound. I had a student do an introductory studio, which was based on a very simple hypothesis, a 40,000-year-old one, where nature gave people everything they needed to live except the window, and if we can address this issue, it is core to architecture. So the student is asked to model a window and everything they need to model about the context of that window (1:50 scale model).

They all do this very beautifully because they are all young students who do not answer back or question why. I had a Korean student, a young woman, who did a very beautiful model, but in her case, the window was a door, with a screen that opened into the house, and it sat in a house in a courtyard, which sat behind a wall. So, if you can imagine this model with a little bit of wall and a door in it and a bit of courtyard, where she put sand, and a little timber platform, sliding shutters, a bit of roof that came out and a deck or veranda all around the house. It was a beautiful architecture model for a student at the beginning of her career. Then sitting on this little veranda were two bits of red Plasticene. I looked at this model, which I thought was beautiful and very interesting as it was culture specific and revealed a lot of things that I had not thought about in the problem. Everyone else had done conventional windows, so I asked her what the red Plasticene things were and she said that they were her grandmother's slippers, which for me was such a wonderful observation, and I often wonder when I am teaching how to get at such things.

This refers to the question of the student not being an empty vessel, but a person that brings something which is human along with him / her. We should be incredibly weary in these discussions that we do not lose sight of that, and several speakers have already touched on that, which for me is a very important issue.

Patrick Flynn, Dublin, IRELAND

I was just thinking, "Wow, how do I follow that!" You will be delighted to hear that I will not have you stand up, but what I will say, in common with Simon, is a thank you to everybody for this excellent conference. It is a privilege to be here and wish to thank Constantin for all this organization, knowing very well what a "headache" organizing such events can be. When I came to this conference I wondered whether conclusions actually mattered. Do we worry about coming to an end? But, here we are at the end of the session, and I will have to say that surely they do matter, but perhaps what is more important is what comes afterwards when you start to pick apart those conclusions and, possibly, go away with something different than you thought was there on that day.

I particularly liked, this morning, Jean Francois talking about the seeds, grass and growing, which is a great metaphor that I think I will take away with me. I suppose, now to be put on the spot of where to go next, is quite hard. I think it will come to me in two or three months' time in the middle of some kind of review by the Dublin Institute of Technology College, one more time, about

whether we have enough classrooms or when I have some student's mother on the phone complaining or asking if he / she is doing alright at school. It is at such moments that I will understand something from today. If I can just pick up from what Simon was saying, to me, the common theme is that to be a teacher, you need to have students. Even if you are a teacher yourself, you are still being a student, and what I am interested in is paragon between students and tutors, which four speakers have touched on, referring to what the tutor brings, what the student has, what emerges from that and how you learn as you teach. It is interesting that all four speakers happen to be here together to conclude this.

Another thing that I was thinking about when Simon was talking about design, what it is and how to teach it, and which I often noticed during the lecture series, especially when the air conditioning was off and getting very hot is that I started getting restless and wondered when it would all end. People started sketching as well as taking notes, and those sketches are "seeds" that were planted six months ago of some scheme they were thinking about and maybe revisiting or, possibly, as in my case, I was drawing some projects I had done in college just to think about them one more time. I am not really aware of how we can teach or even capture. Maybe we give constant lectures and mark the student sketches at the end of the year. I do not know. One thing I would like to look at, however, is this idea of the relationship between students and tutors in those paragon, and that is where I am going to leave it. Thank you very much.

Vana Tentokali, Thessaloniki, GREECE

I would also like to thank the speakers, organizers and most of all, Constantin for the fantastic idea of organizing such a symposium. From the conception of the idea to its application, he raises the questions of *why, how, when*. All these questions in terms of the educational design process is so well done, specified and clearly structured that it reminds me of the complete work of a contemporary Greek philosopher, Kostas Axelos, whose work is based on the exploration of questions. He refers to questions in terms of cross – or trans- questioning. The whole idea is to raise the question, and this is the magic of this workshop, in response to the questions Constantin raised.

Constantin Spiridonidis, Thessaloniki, GREECE

Thank you for all this positive feedback, even if it makes me uncomfortable.

Juhani Katainen, Tampere, FINLAND

I also wish to express my thanks to everyone. We had a preliminary meeting in Brussels about that format and what that form could be, and was quite pleased when this idea of "readers" was suggested, although I cannot remember at this moment who it was that actually come up with the idea.

Consequently, having listened to all the discussions and speeches throughout the last few days, I can say that it has been quite an event. When speaking about the future and the meaning of that document, for me, this is the first time that I have received some prepared information about what is going on in European architectural schools. I have participated in many conferences and spoken at many levels on these issues, but I never had the chance before to have a closer look at what these schools are doing and what these people think about what they are doing. Therefore, as far as continuity is concerned, we should at least try to develop this type of information, print it and circulate it as this is very important. It is also possible for this to be done via the internet. But, irrespective of how it appears, the essence is that it is very important information for teachers in order to look at the various methodologies and ways of thinking. After all, we all have a common goal, which is to give young people opportunities to achieve their educational and professional goals.

Emel Aközer, Ankara, TURKEY

It was a great privilege and honor to be here and participate in these discussions and am glad

to say that the discussions and speeches have already provided a framework for self-reflection and self-evaluation. We may want to share the way we develop and design our courses and hope that these discussions will continue through different media or means. I am also hoping that our students will benefit from these discussions, because I believe that these should be transparent and perhaps we can even create opportunities for students to participate in this dialogue in an effort to enrich our discussions.

David Willey, Plymouth, UNITED KINGDOM

The focus on the idea of working from student experiences has come up quite strongly here, in this meeting, rather than the documentation. The sample of the people, here, has brought this out very strongly. The idea that we can't actually work out from the student is actually a very important idea and it has been a very powerful experience for me listening to that discussion. The other thing I was interested in that emerged yesterday is the idea that there is a shared component in the ethical positions and values we have in our teaching. That idea that we were all hearing different "arias" in the papers written and the question for me was: what on earth is this opera! What is the context of the work? How do we understand these individual pieces within the overall content?

I think that if there are any values in what we do, maybe these values have importance only when they are shared, which then says something about the school, not just the individual teacher or course. Then, there is the responsibility within the school to somehow question whether different values can operate simultaneously within the school. The question, then, for me, is how you deal with the different values, shared values or sense of the school. I think Loughlin was talking about that this morning, when he said that there is something that the school does which for the student represents the whole course or education, which is not an individual "aria" but an "opera." In the school you do not have a Mozart running the school, irrespective of how interesting that would be, though it would also depend on the school. There are arguments, peace treaties and something emerges out of that. The question then is, to what extent can you have an agreement on the matter?

I think that there is something that a school does that goes far beyond the role of the individual class. At Plymouth we are very conscious that our building does the teaching for us in part. It is a social building where staff and students meet outside the classroom in a room with coffee next to a courtyard. We know that we are going to a brand new building that does not have that, but as staff, after having been in the building for many years, we know that the particular space in relation to the studios is part of the way that we teach. However, this information does not appear anywhere except in the back page of a submission we make explaining how we do our work. So, there are things at all kinds of levels that make a school work, making the "opera" work, but that are difficult to get at, yet, if we take these elements away, the school disappears.

One of the things we have not been doing in this discussion is talking about what the school is doing. For example, referring to Aarhus, Ali mentioned that if students are on the move all the time, then students are not getting the continuity of the experience which the school is making. Therefore, I would say that the school has a role independently of what we do or any individual contribution. However, this idea of school role is actually very important and interesting, but it may not have emerged, here, because of the structure of what we have done. Nevertheless, I know from the individual things I do that they could not be run without that context, which is absolutely crucial to the way I work.

Therefore, at a pragmatic level, what we could easily do is, in fact, what I was very interested in from the presentation of the Aarhus team, which is the teaching done at the summer school, and I could see that format if it was developed as actually being, not a small, one-afternoon session, but as the central part of the discussion, there would be two or three different teaching paradigms, working with students, it could be clearly presented and the work could be seen and reviewed by all of us. With this kind of material, we could then have a really critical and informed discussion that would bring forward some real concerns or issues about process, as well as the kinds of things students are concerned about.

Simon Beeson, Edinburgh, UNITED KINGDOM

I have a question. Is there a mechanism by which this discussion can be fed into the next meeting?

Constantin Spiridonidis, Thessaloniki, GREECE

The idea was to give a presentation at the Heads' Meeting, tomorrow morning. This presentation was intended to be brief since the agenda of the meeting is not closely related to this one. In all the Meetings of Heads, we usually have a slot in the morning where we report what has already been done. Therefore, the two previous events will be presented shortly, not just announced, simply because they represent the schools and this is a way of diffusing information to those who are responsible for the administration of the school and who support or not the mobility of schools and staff members.

As I have already told you, we were notified by the Socrates Technical Assistance Office that we will have the possibility of continuing this project, for the next three years, so we can move ahead with the proposals that have been made. Therefore, we can say that we have the possibility, potential and the financial support to organize in the future the second event.

I do have some ideas, which I am pleased to say are very closely related or at least not contradictory to what has already been suggested. Last year we started a kind of inquiry, which although is by no means a closed issue, it has, to a certain extent, been developed. What I am referring to is the mapping of the competences, as Loughlin has already mentioned. This can give us a very fruitful harvest and ground for us to discuss our methods and approaches. The competences appear as a very precise issue and question: how can we develop these competences or even the values that David Willey mentioned in others? Competences and values are more or less similar. My impression is that regardless of the strategy or technique of the event we will organize, it will be very useful to define a number of competences that we consider very significant for us to have as a course objective and think about the kind of teaching methods and strategies that could achieve those competences. We will pool our experience together in order to consider and follow different approaches and considerations that aim at achieving such a goal. This is simply an idea that needs to be developed, but obviously, this is not the right moment for that. If there are further comments, suggestions or reflections, please do not hesitate to send your emails.

I would like to thank the writers for all the efforts they made in contributing to the volume and the guest speakers, who accepted our invitation, particularly the "readers" who were asked to do the difficult work of reading and reviewing the material. Many thanks for your presence, contribution, participation and help.

Chapter 6

Lost in Translation – Accommodating 'the Others' ENHSA Student workshop

Teaching Staff:

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Introduction

Lost in Translation – accommodating 'the others':

The ENHSA workshop title is directed towards the circumstance that Europe is in a process of changes affecting the every day life in any spot of the continent. It can be recognized as migration, multi-cultural exchange and demographic changes.

The workshop is taking place in a dense tourist area, in Chania at Crete in the middle of the tourist season. In this context a simplistic view of the concept of accommodation could be to consider it a relatively simple B2B relationship. The public city life appears to be as rich in diversity and composition as in any other spot in Europe. The general pattern of changes can be recognized, but it is influenced by the local conditions preset by the specific history, culture and economy of the place. It is important to stress that the workshop is not focused on developing new tourist concepts or extending tourism. The otherness is not discussed as a simple relationship among local people versus people from outside. Each individual in Chania expresses several layers of "otherness" in their life cycle and social relationships.

Chania is used as a stage for working with *accommodating "the others"* seen from a general perspective. An aim of the ENHSA workshop is to establish a common understanding among the students of the importance of creating conditions for social and cultural sustainability in a future Europe. In this perspective 'accommodating' becomes an individual concern, and is a matter of socialisation. Hopefully the discussion of the idea of accommodating "the others" will affect the future professional focus of the students participating in the workshop.

The idea of the workshop is to establish an architectural focus on this issue of European interest and to demonstrate possible scenarios of an architectural practise. The workshop discusses how architects can combine knowledge and methods from a wide field within the discipline and adopt methods used in other disciplines relevant to an architectural practice. Future design processes will probably be characterised by several levels of collaboration among equal participants. The workshop intends to demonstrate the value of a wide angled approach to the architectural discipline in order to cope with increasing complexity, and a discussion of how this approach will affect the architectural practises is encouraged.

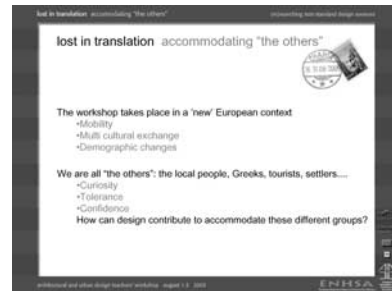
The workshop takes asset of the student's architectural knowledge and combines methods and

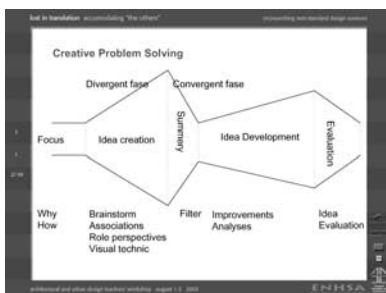
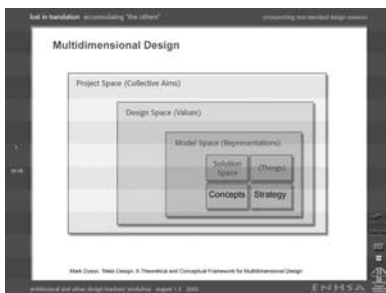
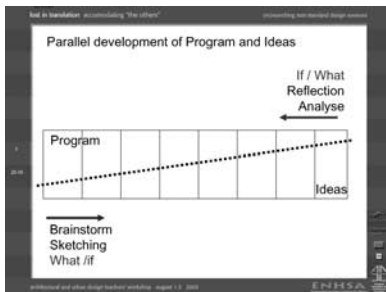
tools from Urban Design and Planning, User Oriented Design and Design Management as a demonstration of a wide angled approach to architecture. Top-down viewing methods are taken from Urban Design and Planning to achieve understanding of the urban fabric. The overview is combined with bottom-up methods developed in User Oriented Design, in order to grasp how the individual reacts to the urban conditions. Another intention of using bottom-up methods is to find unknown and unpredictable practises in every day urban life. The top-down and the bottom-up methods are introduced in the beginning of the workshop to create an overview and a complex understanding of the city in a short time.

Increased collaboration with other groups and professions will lead to a need for explicit declaration of concepts, methods and tools. Being aware of this and being verbal is a way to accommodate "the others" in a team. The workshop intends in any part of the process to clarify the aim and usability of any method being used. The methodological transparency is considered from the top level of the workshop structure down to the introduction of tools and descriptions in every single phase of the workshop.

In order to handle the complexity of the Workshop theme it follows the structure of an Information Management Model gradually unfolding the complexity through entering different information spaces: from a Project space through Design Space and Model Space into a Solution Space. Exchange and processing of information between the various information spaces is discussed in relation to a methodological concept with background in Design Management. The concept is based on parallel design processing and explains how information between the information spaces is developed, exchanged and evaluated in order to generate consistent information. The model is used to demonstrate how development of problem, program and solutions takes place in parallel processes with mutual influence and exchange of information.

The competence developed by using the model is an important component in innovative thinking, and offers ways enabling architects to incorporate their particular competences in a wider range of teamwork and gain the synergy from new constellations of professions. Furthermore it contributes to recognition of the fact that information created by programming can be as valuable as solutions.





The ENHSA workshop framework

A basic idea of the workshop concept is to make every step of the design process explicit. A verbal explanation and a name for every phase, all methods and tools is a way to achieve this aim. At the workshop two descriptions of the design process were given to explain the meaning of the various steps in the process.

The Design Management Spaces

The Design Management Space Model identifies constraints of a project and decisions taken at various levels of abstraction while developing a project. The model can be interpreted as a series of spaces in a hierarchy. If read from the top the model serves as a reference to identify where certain decisions should be taken. A reading from the bottom can indicate if the project has underlying assumptions at a higher level that need to be explicit and considered.

The Design Management Space Model has 4 spaces:

Project Space [Aims]

Design Space [Values]

Model Space [Representations]

Solution Space [Strategies, objects and services]

Seven Project Phases

The Seven Project Phases describe the process in time and illustrate a possible way through the above described project spaces. In the workshop the seven project phases are executed as loops, in an iterative process going back and forth, to increase the understanding of the information in consideration and the decisions taken in every phase of the design process.

The seven project phases describe a series of activities and the kind of decisions that should be taken by the end of one phase and entering the following. By being conscious of the meaning of each phase to the neighbouring phases, it can be made explicit when particular decisions are taken in the design process and the consequences of changes can be analysed.

The seven phases are named:

1. Reconnaissance
2. Investigation
3. Programming
4. Ideation

5. Concept development
6. Strategy
7. Visualization

PROJECT SPACE [AIMS]

1. Reconnaissance

AIMS Introduction to the 6 groups and to group dynamics
Knowledge of Chania, the physical context of the projects.
Overview of Chania; a top-down approach.

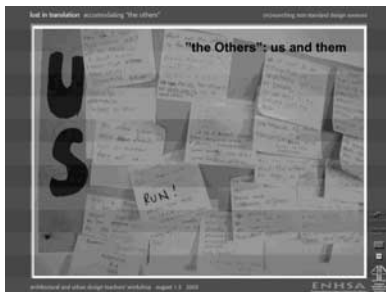
ACTIVITIES *Data mining.* Organising information of Chania collected by the participants before joining the workshop. The method is used in urban design. The information was presented in the format of a short PowerPoint Presentation.

City walks. A walk of 1 hour in a given direction observing changes of atmosphere from one area to another, and indicating borders in the urban landscape. The division in old and new build structures, the different patterns of use and the multifunctional structure was observed and recorded in various ways. Observations were documented in photographs, and collected items.

MegaSize Map. Mapping of city walks on a large map placed on the floor, followed by discussion of observations in the city. The MegaSize Map became the common reference to the understanding of Chania shared by all participants in the workshop.

FINDINGS At the end of the first day the workshop participants had developed a common understanding of the city structure. Different patterns in the city fabric were identified and indicated as being related either to the physical structure or to the use of the city.





DESIGN SPACE [VALUES]

2. Investigation

AIMS Reflection on ethics and the overall values of the project. Understanding of brainstorm rules and training of brainstorm methods. Knowledge of user-centred research techniques

ACTIVITIES *Brainstorm of the overall project theme: "Lost in Translation – Accommodating the Other".* Group discussion of the concept "Accommodating"

Group discussions of the concept "the Others". User Studies in the city. A bottom-up approach. Stalking was introduced as a method of investigating use of the city and to eventually discover unexpected aspects of city life. Interviews were introduced as a method to collect information and a possible way of having assumptions confirmed.

MegaSize Map. 'Stalkings' and locations where information was collected were mapped on the MegaSize Map as a way of sharing information collected by the groups. The process of mapping resulted in a general exchange and discussion of information.

Brainstorm of possible project themes. A brainstorm involving all students and teachers marked the termination of the investigation phase and start of the programming. Ideas for project themes were generated from city walks and from the discussion of values. All ideas were written on a large board, discussed and elaborated in the forum of students and teachers. Each group ended the session by choosing a theme for further investigation.

FINDINGS The discussion of the concepts embedded in the project theme demonstrated significant differences in perceptions of 'otherness' while the perception of accommodating seemed to be shared by all students.

User centred studies were new to almost all students and the information collected through interviews had a great impact on the perception of the use of the city and were referred to during the entire workshop as proof of evidence.

While the shared brainstorm raised many questions and very different suggestions for project themes, the themes chosen by the groups tended to narrow the design space into few topics. The students mainly chose themes related to the use of public space, orientation and the observed division of the city in an old and a new part.

MODEL SPACE [REPRESENTATIONS]

3. Programming

AIMS The programming phase concludes the investigation of the project theme with a statement describing the goals of the project in clear and simple terms. A major aim is to achieve transparency in the design process by documenting decisions

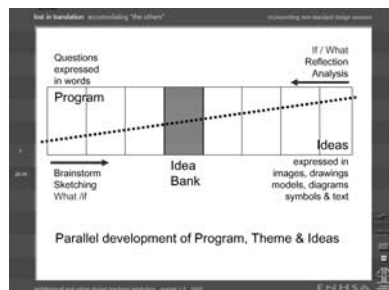
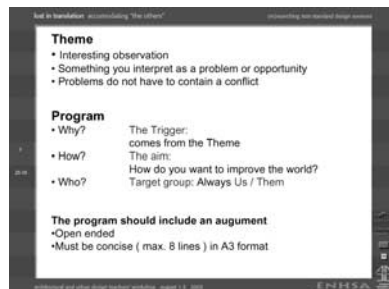
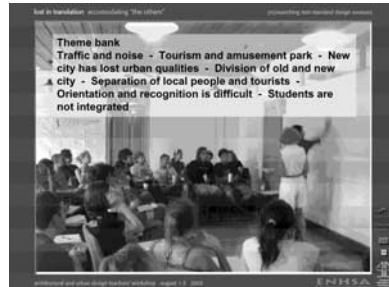
ACTIVITY Each group were assigned to investigate their theme and conclude the work by writing a short and concise program in not more than 8 lines. The program should have a descriptive title and tell *what* the group intended to make. It should explain *who* they expected to address and benefit with the project and *why* this was a good idea.

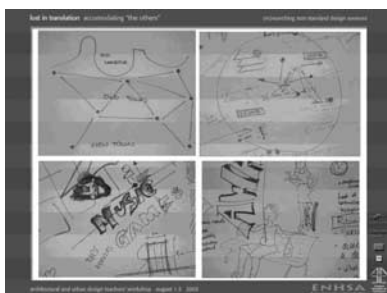
FINDINGS By setting up a tight schedule for the programming the students were pushed to converge their ideas and making decisions at a time when they were not quite ready to do so. This was part of the workshop program and gave meaning during the following phase.

4. Ideation

AIMS The aim of the ideation phase is dual. One aim is to develop ideas that can lead to different concepts. Another aim is to keep the program open, to enrich the approach to the project and at the same time focus the process.

The students were introduced to various methods that could be used to subsequently widen up the discussion of the concepts and to focus and delimit the ideas.





ACTIVITY

Ideation process techniques were introduced. The groups worked out "a cloud of ideas" - at least 10 - in images, words and diagrams concerning their project and based in the group's program. The ideas were exchanged and summarized by mixing groups during the process. The format was a 10 m's roll of paper and the ideation process was guided by time limits set up during the ideation phase.

Finally all groups were assigned to choose the 3 best ideas for the continuation of their project and present them to the entire workshop group.

FINDINGS

The paper roll opened up the ideation process and the roll became the shared point of reference in the remaining time of the workshop. The program that came out of the previous phase together with the paper roll documented the process of divergence and convergence.



SOLUTION SPACE [STRATEGIES, OBJECTS AND SERVICES]

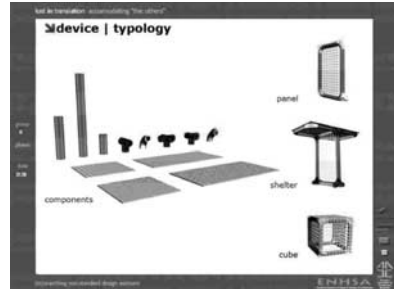
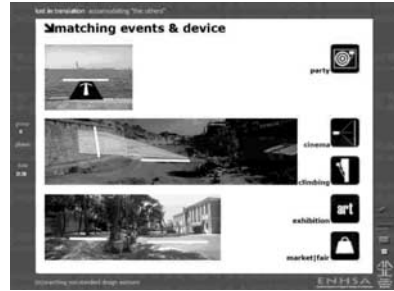
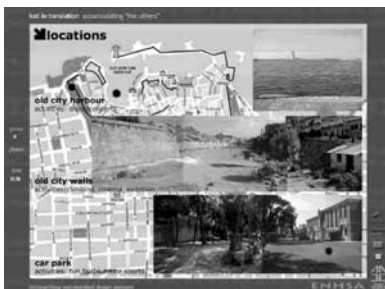
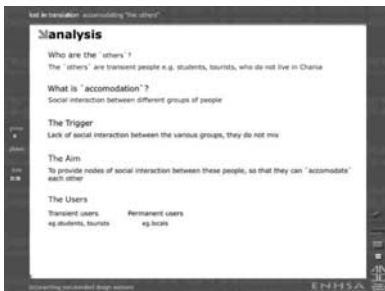
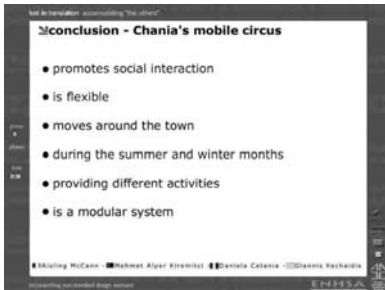
5. Concept Development

AIMS

In the *Project Management Model* the Concept Phase represents the first step into solution space. It is a convergent phase excluding and leaving behind a bunch of ideas, focusing on a single idea with a reflective understanding of its potentials. Concept development is also a particular way of expressing an idea by shaping it in a general and abstract form intended to be explored and concretized in the phases that follow.

ACTIVITIES

Day long group work terminated by slides presentations and discussion. The format of the presentations was limited





to a short verbal explanation and 5 slides made of the material produced during the day.

FINDINGS Students start to take over the project development and make use of their skills and methods brought from the various schools represented. The sampling technique of taking photographs of sketches to be edited in a digital presentation corresponded well to the speed of the working process.

6. Scenarios

AIMS The projects resulted in services and activities and to a lesser extend in products. A scenario involves a time dimension and is a way to describe what happens with the solution over time, how the service or activity works under shifting circumstances.

ACTIVITIES Examples of simple graphic techniques to describe scenarios were introduced and discussed in relation to the various projects.

FINDINGS The scenarios offered opportunities to analyze the proposal by making different settings for the activity or service and depicture how it unfolded in the situation. Subsequently the scenarios added information and understanding of the solution and gave inspiration and ideas for further development of the project.

7. Visualization

AIMS The final presentation of the projects should describe the process as well as the solution and should furthermore include scenarios telling about the project in different places and situations.

ACTIVITIES The students were assigned to do digital slides presentations in 7 minutes explaining their work, and the digital format was considered most appropriate to facilitate an immediate distribution of the results among the students. The character of the projects, being services and activities, made the narrative an important part of the presentation,

and the groups were encouraged to make *story boards* to plan their presentation.

FINDINGS The groups worked enthusiastically to fulfil the assignment and it was interesting to observe the students' capacity to integrate new methods and techniques.

Conclusion

Bringing together students from 7 European countries, and expecting them to work in groups for one week being taught new methods of design thinking, is challenging for both students and teachers. When looking back at the workshop I consider it successful in various ways.

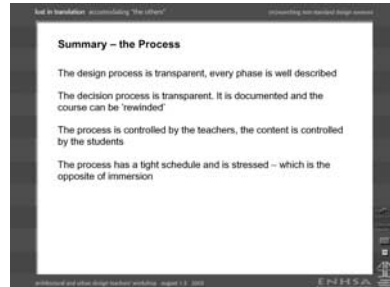
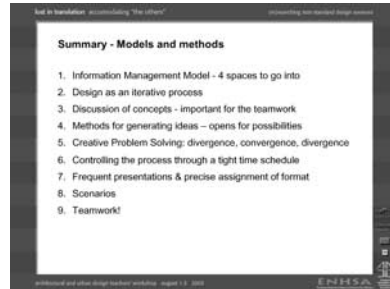
The students overcame language barriers and communicated socially, verbally and by using architectural tools. They came to know and understand cultural differences exposed through the shared discipline of architecture. They learned new ways of working by collaborating with peers in the groups, and were taught methods familiar to some and totally new and even strange to others. They experienced the power of team work and the pride of a joint result.

The most striking and unexpected to the group of teachers were the number of students who had never been introduced to brainstorm techniques or generally speaking, to idea generation techniques. How can a discipline, engaged in educating students who are supposed to entering a profession known for creativity and innovative behaviour, expect their students to develop such skills if they remain part of the tacit knowledge?

Point of information

The workshop has its own homepage. The six student projects are available at the homepage, as well as the final report of the workshop.

And there is much more. Have a look and enjoy it.
<http://www.a-aarhus.dk/chania>



Questions and Debate on the students' workshop

Chaired by **Marvin Malecha**, Raleigh, North Carolina, USA

Juhani Katainen, Tampere, FINLAND

That was interesting. I understand that when you have only a week's time, it is very difficult to travel to another city and make proposals. I really appreciate the fact that you used a systematic approach. By the way, did you have the chance to have any contact with the local people there and ask for their opinions? Although, I suppose, you would have needed more time for that. Besides, you would have had to contact such people as restaurant owners, etc. But, that's another story! In any case, thank you for sharing the experiment. I found it very interesting!

Uffe Lentz, Aarhus, DENMARK

That was just a short demonstration of the work of two students and we chose the theme of "young people" so as to ensure that they would meet someone they could communicate with. The goal was for them to talk with others and refer back to them in case they needed more information. Then we arranged for local people to attend a presentation, but only two of the residents appeared. In the group, however, there was also a Greek student who shared opinions with us that proved to be very helpful.

These user-oriented methods actually led to observations we would not have seen if we had looked at the city from the top-bound view of the statistics. We did find stories that were surprising!

Simon Beeson, Edinburgh, UNITED KINGDOM

You showed a very interesting diagram you had made in advance about how you wanted to run the project, but you have not told us or shown us what actually happened in the end.

Pia Bille, Aarhus, DENMARK

We did what the diagram showed, but we did not go according to the schedule. For example, we had to alter or extend certain phases, but we actually went through the different phases, except for one, the 6th or 7th phase that was omitted. It served mostly as a guide or reference for everybody about what we were doing.

Uffe Lentz, Aarhus, DENMARK

I think the interesting part of all this was the reaction we got from our students. The situation was somewhat of a cultural shock for them because they were not used to the task of developing their own traffic space. They said that, normally, they were presented with a specific problem and expected to find solutions for it, whereas, here, they were divided into pairs and assessed on developing their own space, creating their own problems and finding solutions to them.

Ali Uyanik, Aarhus, DENMARK

That pretty much answered my question as far as your reflections on different students are concerned. Perhaps, you could just elaborate a bit more on how you see the differentiation between schools and how they work, because it is all very well to talk about all this interesting data, here, but you have actually lived through the experience and can give us some first-hand information.

Pia Bille, Aarhus, DENMARK

We saw huge differences and these were related to culture, what students learned and what students thought were relevant problems for projects. Also, I think that in all those discussions on values, what was very important was that students were aware of these differences, right from the start; otherwise, unknowingly, they might have had many more clashes than they actually did. I could try to answer your question by saying that one of the main findings that is worth stressing from the student-evaluation scheme is that only 20% of the students had ever tried to "brainstorm" a problem. That was very surprising to us, because we had automatically assumed that students would approach and open up a project by thinking in a very structured and analytical manner. However, we were proven wrong. Also, students were not even used to working in groups, and, in this sense, they really gained a lot from the workshop. I think that the social experience of their finding a new companion to work with was important, but so was the experience of actually working with other people and getting mercenaries to facilitate this collaboration.

Christian Huetz, Regensburg, GERMANY

On the one hand, you mentioned that the students had a real socio-cultural and educational experience at the international workshop, but the question that is also very interesting is what were the teachers' reactions?

Pia Bille, Aarhus, DENMARK

I am not quite sure that I understand your question. We were the ones that prepared everything... (Interrupted by next speaker)

Maria Voyatzaki, Thessaloniki, GREECE

Maybe we need to explain at this point that when we ran the workshop with Christian Huetz, like the students, most of the teachers did not know each other before the workshop. But, this exercise was run by a group of people that know each other, are of the same nationality, speak the same language and have taught as a team before.

Pia Bille, Aarhus, DENMARK

We did have some difficulty in the beginning since we were a group of four different people that, although had worked together, did not actually know the others. However, all the cultural differences... (Interrupted by next speaker)

Christian Huetz, Regensburg, GERMANY

But you were the only ones running the workshop, so, there were no teachers from other countries whose input would have made the project even more advantageous and impressive.

Uffe Lentz, Aarhus, DENMARK

Actually, we saw our task as creating a very sharp profile of what we did so that we could demonstrate one way of working. This would allow us to discuss ...in an effort to determine what happened. It was for this reason that we wanted to establish a very strict profile and be able to say that in the school of architecture some tasks need new methods, though this is not always the case. Most of the methods we normally use come from the Design Institute and the design management group design methods for information...

Pia Bille, Aarhus, DENMARK

We had difficulty since it was only the two designers that knew the mercenaries, and we had to get to know them. On the other hand, I knew the subject because I was the urban designer and

urban theorist. So, we each had our own problems in working together.

Christian Huetz, Regensburg, GERMANY

I would just like to point out as critic that it would have been very interesting if the students had been accompanied by a teacher from their own country.

Pia Bille, Aarhus, DENMARK

That's an interesting idea!

Simon Beeson, Edinburgh, UNITED KINGDOM

I just want to probe a little deeper because I was surprised when you said that nothing different happened. I have been sitting here thinking about this as I did very similar projects, such as this, when I was a student in both winter and summer schools, and as a tutor as well, and something always happened. So, I would like to know whether there were other events outside your program of importance to your outcome. I think these diagrams are great and very useful for us to be able to see a project and lay out in advance what we think is going to happen, how you are going to lead and try to control the process and see what happens. But, that final bit of evaluation is very important to find out where or how the student process and your interaction with the students diverge from that. Therefore, there must be other experiences. I know that in workshops like this one, there are some students who often break out and refuse to cooperate. They decide that they are not going to design, but make something, or find an alternative way to presenting a drawing, such as collecting things rather than accepting to draw on our sheet of paper. So, I am actually surprised that none of that seems to have come forward in this particular project.

Pia Bille, Aarhus, DENMARK

Of course, it did! In fact, one group was not able to do anything together. Despite their trying over and over again to present projects like the others, they were not advancing, so, we were forced to engage them in exploring why this was happening. As a result, they spent a good 24 hours trying to find out what was going on. Their presentation did not have any project or solution in terms of a description of what to place, when and where to start, mainly because they had conflicting ideas. We then asked them to develop their own ideas, which they tried to narrow down, during the course of a 3 to 4-hour period. Then, they reflected on the question of what the outcome could have been if they had been able to realize the task at an earlier stage. Although they had not given any solutions, in the end, it turned out to be a really good learning experience for them.

Simon Beeson, Edinburgh, UNITED KINGDOM

I think Constantin said something very interesting, earlier, to the effect that, as teachers, we quite often learn the most through our own failures. Therefore, it would be very interesting to see on your website a documentation of the ones that did not follow the way you went forward because information on these students would, presumably, tell us something new. The ones that followed the program and did what was expected, in the end, simply did the predictable, but it is the others that I would be interested in hearing about.

Pia Bille, Aarhus, DENMARK

We could say that your expectations are predictable because they did not have time to deal with their solutions since they were concerned with the process. In that sense, they might have been a bit disappointed, but they did not mention it or do any critical evaluation, but I am sure that they had expected to reach a point other than where they started. Nevertheless, we are

used to that since it is our way of teaching.

Uffe Lentz, Aarhus, DENMARK

They may not have come up with solutions, but the product they produced was analyzing why, which was very important.

Constantin Spiridonidis, Thessaloniki, GREECE

It is quite possible that you might not be aware of how this particular project came about, so, let me give you a brief history. This was a pilot project, which the Socrates Office requested from our Thematic Network, with the aim of developing a program or initiative where students could participate in the activities or events of the ENHSA Network. After examining the various possibilities, we thought it would be useful to organize a workshop which would differ from the one we had already organized in the past into the framework of Socrates Intensive Programs.

The idea behind that was to establish an annual event where a school of architecture would invite students from various other schools of architecture to attend a workshop that would reflect "the contemporary face" of the particular school running the workshop. Therefore, with this in mind, we asked the Aarhus School of Architecture to assign a group of teachers who would run and present the workshop, and, in turn, we would distribute the results of the school's contemporary profile. Even if this is a pilot project, my impression from what has been echoed here, so far, is that it has been very successful, and if this will be positively evaluated by the Socrates Technical Assistance Office, then, next year, possibly, another school will be asked to run the project. Should this continue, over a number of years, we will have collected material which is beyond the official school program, with participants of a different student population from those that we are used to having in our courses. Therefore, keep this in mind, and it is possible that we will be discussing next year with another group of colleagues yet another experiment as the one Pia Bille and Uffe Lentz have presented today. Finally, I want to thank Pia Bille, Uffe Lentz, Brett Patching, Jane Willumsgård, very much for their fruitful and quality cooperation.

Pia Bille, Aarhus, DENMARK

We appreciate having had this opportunity.

Annexes

Annex 1

On the Search of the Research Core of Architecture

Josep Muntanola Thornberg. Architect

Asking Questions

Neither Vitruvius nor Leon Battista Alberti had problems with the research core of architecture. Both *De Re Aedificatoria* and the *Ten Books on Architecture*, are treatises that open huge doors and possibilities to architects and others to do research on architecture and "of" architecture. Why then is it now so difficult to define such a "core" of architectural research? Why are architects so reluctant to do research and to participate on research? And finally, why are research frameworks skeptical towards architecture as a research independent realm? Why have doctors, lawyers and others no problems of this sort?

The answers are the same for all these questions, and architects should meditate on them if they want to survive. The first answer comes paradoxically from the same scientific huge development of sciences. The more they develop, the better architects know the danger of a "scientific" architecture, authentic monster of human development, because the complexity of architecture as "science" challenges all these developments one by one. Just think about the "phylogenetic" model of architecture recently developed, and you immediately notice the ridiculous of the situation, when you want to deduce architecture directly from a scientific paradigm.

The second answer comes from the "artistic" autonomy of architecture, against which Adolf Loos wrote one of his best essays. Architecture is an art that is very special, since, according to E. Kant, the use and the function are the aesthetic contents of it. Architecture paradoxically is an art of "necessity", or a non-art, because we all know that art cannot be necessary in scientific terms. However, this artistic dimension of architecture is in the origin of a deep misunderstanding about the core of architectural research in relation to the design creative process. In fact, the innovative power of our brain is the same in art, in science, in politics, etc. It is not "less" or "more" innovative research in one of our intersubjective dimensions than in other. Nevertheless, innovation in art is based upon the contrary direction of sciences, it goes deep in our sensations, images, emotions and feelings, (Levinas said it is the shadow of knowledge) and cannot be identified with scientific innovation without an "inversion" or "reflection". We cannot go from art to science without research. Art is a special kind of research but is not scientific research. Architectural design as art is not a scientific process. However, architecture is "non-art", so architecture can be "scientific". But the misunderstanding has very deep roots in the way art is analysed by philosophy as "subjective", or in the way art in architecture depends upon the "genius" of the architects. Both mistakes come often from a wrong reading of the philosophy by E. Kant. In fact, the aesthetic dimension of architecture can be analysed through poetics, rhetorics or semiotics and it is neither mysterious nor "genial", it is simply human, aesthetically human, that is, a way of pretending to be (or not to be), a way of fiction.

The third answer comes from politics and ethics, and architects should take this point seriously. Research must be public. When one basic scientific discovering is published by a serious review, everybody can use this new scientific finding, in exchange the scientist earn fame and perhaps a better post to do research, but that is all. Architects do not like this. We like mystery, to be the first to do one design, to be the first to build that building, etc. Then research is against our professions and our benefits, and we, systematically, use the ideas and the design of others without the names of the persons that have produced, in fact, these ideas and designs. The ethic rules are totally "twisted" in relation to the scientific rules. For instance, the magazines on architecture are prestigious because the "owners" of the magazines select the content and have prestige in the profession. If the magazines send blindly to other architects to check the quality of the contributions, this would have a bad lecture, something like: "they do not have knowledge about what they want so they need to ask outside".

To conclude, a mixture of scientific skepticism, aesthetic egolatriy and ethical selfevaluation, have paralysed a very rich core of research on architecture. We, architects, are full of excuses, but this situation is a shame.

Looking for Answers

The core of architectural research is in the same place we lived it years ago: At the crossroads of art, science and ethics, on the one hand, and where design, building and dwelling meet, as Vitruvius, Heidegger and a long list of people located it. There is no way to go directly to this core of architecture. This is true in any research topic of medicine, law, biogenetics, etc. It is necessary to accept different research perspectives and often, to interchange these different views with personal freedom and a maximum knowledge.

But each perspective or research approach cannot be neither "private", nor a simple copy of a situation on environment, etc. In both cases there is no way to relate the "private" researches, or the "repetitive" ones, in a positive way. For instance, to explain what I am doing in my office can be good if there is a "research" on it, but if it is only marketing, it is not enough.

To use design as a rich tool for research is not impossible. However: What about the social and physical impact of a design

(and not the design in itself) before and after construction? Design in itself can also be a good research, if, and only if, the "private" is made "public", like Klee or Kandinsky proved. Life is research (and design is life), of course, but we know that a lot of research efforts have been necessary, for centuries, in order to discover a bit why life is as it is. In relation to architecture we are far from the understanding of what it is, why it behaves as it behaves, and what use it has for men. So to say that my design is research is a pretentious position: Who knows what my design is? How do I know that my design is what I think it is? For what can my design be used, or why is my design what it is? Simply questions that one person that wants to use his or her own design as research project should answer.

The three dimensions of architecture: design (mind), construction (land, city, and territory) and use (society, history, culture) are huge research fields, and the core of architectural research is just the way design, building and social use are related to each other. We, architects, need a specific research field called: architecture, as doctors have medicine, and neurologists the brain and the nervous system. No urbanism, or building or environment, simply: architecture. If we select the right perspectives or approaches inside this box "architecture", research will start to develop, by architects and by others. Now architects are working for geographers, engineers and so on. We, need, I insist, a box named architecture. We should not be afraid of this. Public knowledge about what architecture is can alarm bad architects or speculators, but it should not scare good Architects.

As Aristotle and Mikhail Bakhtin insisted upon, ethics, at the bottom, is an architectonic problem, so, we should decide if we prefer ethics and research, or we prefer to remain without both forever. Nevertheless, think before, if with this second choice we are losing architecture altogether too. Think before, just in case.

The Research Core Is Where the Architect Should Be

In order to have a real architectural research core, we should begin with a clear distinction between research on construction, dwelling and design that is not related to architecture, and research on these domains that is related to it. We cannot compete with engineers, geographers, social scientists and psychologists or historians of art in a field they are much more prepared for.

However, we should develop research on architecture when construction, dwelling and design are "architecturally" linked. Of course, in this second case, architects need a clarification about his or her own responsibility. For instance: Is the architect responsible for the design of a building in a concrete place? My answer is yes. He or she is not only responsible of the design of the building (or city), but of the design of the building (or city), in the particular social (historical) and physical (geographical) setting where the design is built. There is no way to deviate this responsibility to the social opinion, or to the politician or owner. Just compare with medicine in order to have the opposite situation. This has nothing to do with the right to decide where and how to build by people; architects can always refuse to design a building when they believe the urban or political decision has been wrong. This is the only way to maintain credibility based on public research.

Of course, we, architects, should work with interdisciplinary and transdisciplinary teams of research, but this is not an excuse for avoiding the core of architectural research. For instance, we should investigate not only the fractal structure of geometric form in our computer design projects, but the physic and social dimensions of these "fractal forms" in real buildings, landscapes and cities. An architectural form is not simply a geometric complex drawing, but a real physical and social place, where the interaction between building, dwelling and design is the main architectural dimension to analyse. Mathematicians know "fractals", as abstract entities, much better than we do, but they know nothing about the transformation of this fractal form into parks, buildings or cities.

There are much more examples to develop, but I think that my argument is clear enough. Sometimes I have the strange sensation of being closer to old theories than to the new recent ones, nevertheless our historical situation is today different, we can learn from those old theories, but we should adapt them to present times. And we need to go fast. Research is going faster and faster, and we are losing the trail, faster and faster too.

The Basic Role of Education

Education is the only way to engage architects in a new public attitude towards research on architecture. I agree, totally, at this point with the excellent book edited by Martha Pollak: *The Education of the Architect*, the MIT Press, 1997, where the subtle interplay between profession and education is presented as a process of control by the former to the latter. The total failure of Lewis Mumford in front of Ph. Johnson and Hitchcock is an excellent point in the book, as well as the analysis of the ideas by F. L. Wright about new technology and architecture.

In conclusion, schools have not been an alternative research way of practice and theory of architecture, because the paradigm of what is an architect has been dictated from outside the university. Public freedom of research on architecture has not been a reality in our schools during the last sixty years, with some exemptions of course.

J. Ll. Sert sent to me in 1967 the following letter in Catalan, that I have translated into English. He, who was Dean of the Graduate School of Design in Harvard, explained to me the core of an ideal School of architecture that, Alas! It never was...

Cambridge, 6 June 1967

Mr Josep Muntanola

Dear colleague:

Thank you for your letter of 20 May. I have had too much work in the last weeks to write. I am sorry for the delay. I will send separately catalogues and other information about the Graduated School of Design and a copy of a conference, even though it is not recent material.

A school of architecture and urbanism, both are by nature inseparable, is a center of experimentation and investigation that has to change anticipating the social, economic, ideological and technological changes of our time.

The courses, programs and experiments are concentrated in three main groups.

a) Knowledge of man and the natural elements, (physical and psychological reactions) - from anthropology to urban sociology.

b) Knowledge of the visual world - conception, perception of spaces, volumes, elements of communication and links, (interrelations) - Functional spaces and their emotional content. Three-dimensional elements and movements that replace words. Establishment of visual vocabularies.

c) Knowledge of the methods of execution - architectural technology and urban technology, interpretation of materials and their behavior, structures, systems of climatological control, systems of services and channelizations, interrelation of systems, economy, financing, and legislation that make possible and executionable the concepts, ideas and projects whose main basis is the creation of a world of spaces, volumes, forms and communications that respond to the human rights we all fight to establish.

The young generations are aware that the architect-urbanist of our times is not another specialist, he is a generalist-coordinator whose main mission is the establishment of a new visual order that agree with the aspirations of the majority of people. Spiritual and material aspirations to which they have the right as individuals and as members of a community of free men.

The reorganization and the new urban-regional structure (a result of the new aspirations, the new technology and integration of systems), of which architecture is an integral part, is the answer to our profession and our contribution to the society of which we are members.

I think I will be in Barcelona at the beginning of July, for a week. If you want us to meet, tell our friend Prats.

Sincerely yours

Josep Lluís Sert

As Mark Jarzombek indicates in the book I quoted above:

"The rise of Martin Heidegger's popularity among art and architectural theorists certainly is an example of how a philosopher's writings came to legitimate perceptualist-based aesthetic consumerism. Truth was achieved not by going to a library, not by laborious reading of books from antiquity to the present, not by skeptically questioning one's education, and not even by musing on one's intellectual inadequacies. Nol Truth can be achieved by looking at a painting by Van Gogh."

And Royston Landau writes:

"I have tried to suggest here that the domain of ethics can and has played a major part in architecture, both in relation to individual action and in the cultural agendas of correctness that it has helped to create. I have also attempted to sketch in some historical architectural evidence suggesting that the Modernist agenda started as an ethical person construct that found its way into architecture, but in later phases began to fade as architectural thought became immersed in form and technology. But also, the more recently named, but still not defined post-modernist model has illustrated that the ethical can operate at two conflicting levels at the same time – it can invoke the free person and in so doing promote free expression, but in the act of celebrating that free expression that same individual can create, or in the case of architecture can produce, an autonomous gesture of cultural antagonism."

Although architecture has been passing through a recent period in which there exists a dominant architectural amorality, I suggest that in the current climate there are very positive signs of the beginnings of a new ethic concerned with natural, human, and ecological rightness, which for the first time appears to be bringing together, in a comprehensive way, architecture, ethics, and the person."

Perhaps I am not so optimistic as Landau is, but I agree with him in the general diagnosis of a paradigmatic architect working with a modern "self-expressionistic" amoral "culture", that demolishes, not only traces on our environment, but destroys our scientific, aesthetic and ethic architectural research core too.

Epilogue: The Poetic Hope

I do believe that poetics is inside the core of our architectural way to do research. However, to explain it will make this communication too long. So I reproduce some verses by Petrarca almost seven centuries old, but alive as ever. I think they contain the research core of architecture:

Francesco Petrarca (Codice Vaticano 3195)

In morte di Madonna Laura

Valle che de ' lamenti miei se ' piena

Valle che de' lamenti miei se' piena,

fiume che spesso del mio pianger cresci,

fere selvestre, vaghi augelli e pesci

che l'una e l'altra verde riva affrena,

aria de' miei sospir calda e serena,

dolce sentier che s_ amaro riesci,

colle che mi piacesti, or mi rincresci,

ov'anchor per usanza Amor mi mena,

ben riconosco in voi l'usate forme,

non, lassol, in me, che da s_ lieta vita

son fatto albergo d'infinita doglia.

Quinci vedeo 'l mio bene; e per queste orme

torno a vedere ond'al ciel nuda è gita,

lasciando in terra la sua bella spoglia.

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Annex 2

Architecture as a Thinking Matter: Mind, Land and Society in a Global World

Josep Muntanola Thornberg. Architect

0. Introduction. The Pathology of the Interactions Between Mind, Land and Society

It has been long stated that the organization of the land reflects the cultural, mental and social organization of the men who built that organization, and that the pathological ways of living and thinking are reflected upon space forms and uses.

The word "formae", in itself, in its original meaning, signifies the lots of land instituted by the Roman Empire everywhere in Europe, and in the Middle East and the north of Africa, as a key global link between mind, land and society, regardless of the specific local cultural and climatic trends of the place. A plumbic copy of each "formae" was kept in the General Archives of the "Centuriato" in Rome, as a General Register of Property.

The wide theoretical and urban planning tradition from the Greek and Roman origins until the works by P. Geddes, L. Mumford, follows this vision of space as a healthy or a pathological social agent (1). The urban growth in the last hundred years has named all this tradition a "moralistic" "old fashion" way of thinking because technology and science are today strong enough to solve any "pathology", and we build without cultural limitations, in spite of some isolated and minority voices of "critical resistance" (2).

Late developments, a mixture of ecological and anti-global trends uncovers perhaps deep hidden changes, in the mind, land and society interrelationships. Some sort of "new way" to look at the social and technological fast transformation of our environment. First step was the degradation of natural bio-diversity and health, but second step is the political struggle for energy and global change versus local socio-diversity. Of course, architecture cannot remain "in-different" to this simultaneous "new way", between mind, land and society (3).

Can this "new way" be the "old way" designed by Plato in Timaeus when he writes about a strange "third way of thinking"? (4).

1. Architecture as Thinking Matter

At a crossing way among different philosophical late developments as: Paul Ricoeur, Jacques Derrida, Emmanuel Levinas, (5), and keeping in "mind", previous developments by Mikhail Bakhtin, Jean Piaget, J. B. Grize, John Searle, etc. (6), we are now better acquitted for an analysis of architecture as a "thinking matter", that is, as a material form invested by scientific "intelligibility", aesthetic "intrigue" and political "inter-textuality", three human qualities that we "transfer" to the land we build (7).

As I have discussed at length in other publications (8), the best concept in order to grasp how this is possible is the concept of "trace" (from Latin tractus, to draw or to design) analysed overall by Ricoeur, Derrida and Levinas. To think "by tracing" is not the same as to think by "talking", however our brain is able to "think" both ways (and through music too). So it is important to keep in mind this "thinking-diversity". As a matter of fact, this "thinking-diversity" defines differences between cultures, and only a globality of one unique universal "culture" would be able to produce brains with the same "thinking diversity". All this dialogical complexity was already clearly discussed by the astonishing Russian anthropologist, linguistic and literary critic Mikhail Bakhtin (9).

Each "way of thinking" has its role in the global communication, and semiotics of space has just the role of defining the specific qualities of architecture as a human way of thinking and communicating. Some specific qualities of architecture as a thinking matter or "trace" are:

- a) The "trace" is the only sign, according to Paul Ricoeur where the sign and the "empirical cause" of the sign convive. There is an overlapping described by Ricoeur as follows:

"So the trace combines a relation of significance, best discerned in the idea of vestige, and a relation of causality, included in the "thing-likeness" of the mark..."

- b) The "trace" interconnects building and dwelling. The Catalan architect Enric Miralles described this quality pointing to the specific power of the design, because it helps you "to enter and to go away from the real physical and social place where your design will be built." And you enter and go away throughout the design itself. It is another way of conceive the complex quality of design as "trace" defined by Ricoeur.
- c) The "trace" is a document and the document is law. This social quality of design as "land", clearly expressed by the "formae" of the urban planning in the old Roman Empire, is embedded in the notion of "trace" too. Ricoeur compares this quality to the "calendar", or law of order of time.
- d) The concept of "mask", so important in the philosophy of E. Levinas, is linked to the notion of trace too. Paul Ricoeur makes the following connection:

"I have borrowed the very expression: the significance of the trace, not from Heidegger, but from Lévinas..."

- e) Finally the concept of "chrono-tope", defined by Bakhtin, synthesizes all precedent qualities in one: the "chrono-toped" intelligibility, or wisdom, in any work of art. The "chrono-tope" can exist because men have a dialogical power of think-

ing. One article by W. Clocksin points to the same argument when it differentiates between constructivism and constructionism. Only the latter is dialogical (10).

A design is a link between physical space and time and social interaction, or between the "peripateia" (poetic inversion between space and time) and the "recognition" (poetic uncovering of the real identity of the same person). This is possible in architecture because "building" and "dwelling" are linked to each other throughout this same link between these two poetic structures. The building form is the mask allowing social "recognition" thanks to dwelling, and the building function takes, simultaneously, the space and time "peripateia" by allowing the inversion of several functions in the same place, configured by dwelling forces too (11).

As M. Bakhtin indicates, there are no meanings without representation (words, sketches, sounds...) and the chrono-topes are the doors the meanings need to pass through. It is important at this point to reproduce the whole text by Bakhtin: (pages 257-258) (9).

"In conclusion we should touch upon one more important problem, that of the boundaries of chronotopic analysis. Science, art and literature also involve semantic elements that are not subject to temporal and spatial determinations. Of such a sort, for instance, are all mathematical concepts: we make use of them for measuring spatial and temporal phenomena but they themselves have no intrinsic spatial and temporal determinations; they are the object of our abstract cognition. They are an abstract and conceptual figuration indispensable for the formalization and strict scientific study of many concrete phenomena. But meanings exist not only in abstract cognition, they exist in artistic thought as well. These artistic meanings are likewise not subject to temporal and spatial determinations. We somehow manage however to endow all phenomena with meaning, that is, we incorporate them not only into the sphere of spatial and temporal existence but also into a semantic sphere. This process of assigning meaning also involves some assigning of value. But questions concerning the form that existence assumes in this sphere, and the nature and form of the evaluations that give sense to existence, are purely philosophical (although not, of course, metaphysical) and we will not engage them here. For us the following is important: whatever these meanings turn out to be, in order to enter our experience (which is social experience) they must take on the form of a sign that is audible and visible for us (a hieroglyph, a mathematical formula, a verbal or linguistic expression, a sketch, etc.). Without such temporal spatial expression, even abstract thought is impossible. Consequently, every entry into the sphere of meanings is accomplished only through the gates of the chronotope." (4).

2. Towards a Semiotic Simulation of Architecture as Thinking Matter

A semiotic system of architecture is somewhat located between the "psy-physical" genetic systems and the "socio-genetic" historical development of mankind. It is, then, close to verbal language, and, simultaneously, far from it. The "Silent Language" of Eduard Hall was a good example of what happens in space, and the "Space is the Machine" by Bill Hillier is a suggestive approach too. Late developments in artificial intelligence, spatial cognitive systems and semiotic theories are promising, and they respect very old theories as the Greek ancient ideas about "Khora" by Plato, about the dream-like nature of space: "when all senses are absent..." "or through a strange kind of spurious reason (or way of thinking)..." (4).

However, it is the poetic and rhetoric structure of space as configurative systems between building and dwelling, that invests the "trace" as key element in the spatial processes of semiotics, of a non-verbal communicative dialogue.

In fact, in order to pretend to be poetically or rhetorically effective, architecture should be "intelligible", and, as in any way of thinking, this intelligibility demands a "reversibility" between subjects and actions upon objects or subjects. In our case, this "reversibility" is the work of design (or "tracing"). It is design that can convert dwelling into building and building into dwelling, by making space a symbolic game of building, where plans are the symbolic representation of this same game.

New philosophical developments can help architecture to be "semiotically" intelligible. It is impossible, as I have suggested, to develop one "system of communication" that is universal and able to represent "reality" globally and totally. Aristotle advises about this silly possibility through which reality and communication will disappear altogether. Each "channel" operates the whole by specific means: verbal, music, architecture, etc. In diagram I can be found another attempt of classification of those "channels". A very silly task indeed, but human curiosity has no limits.... In this classification it is the concept of "chrono-tope", that takes the command. It is also impossible to identify one channel with the other: music with architecture, verbal with sculpture, etc. We can compare. In fact, we do all the time. But we cannot identify. So what is specific with architecture as a thinking-and communicative-"channel"?

This is why the concepts of "trace" and "mask" are important. Only architecture can build objects with "trace" and "mask" qualities, by linking space and time qualities of matter (streets) with "mask" qualities of subjects (windows as eyes).

In diagram I, I have developed a frame of "chrono-tope" levels of understanding, in order to conceive the analogies and the oppositions between arts, and between arts and sciences. The epistemological background of this diagram is related to the work by Jean Piaget in the seminal book: Play, Dreams and Imitation (12) and, of course, to the work by M. Bakhtin.

According to the work by Italian philosopher Rita Messori, the link between logos and topos needs philosophical classifica-

tions. The dialogical intelligibility of architecture, between the poetic intrigue and the rhetorical inter-textuality of places, points to a better understanding of the architecture itself. In fact, she proposes a new interpretation of the Babel Tower Myth. It was not a divine "punishment" for the size of the tower, but a "punishment" because men should "cover all the planet of earth", not to remain in one place. To remain in one place produces in-communication between languages. In this way poetic conception and translation (from one language to another) are the same basic work of "metaphoric" translation or "change of place". To change a place and to change from place to place is the same basic change of intersubjective communication between languages and places (13).

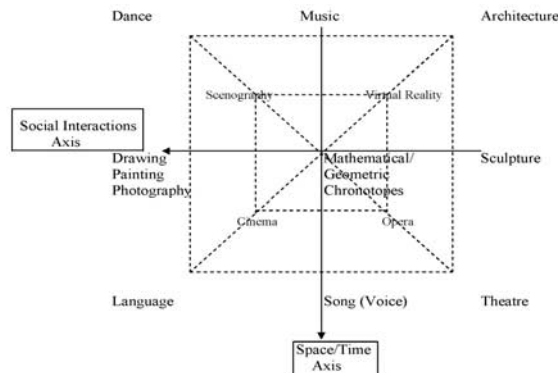


Diagram I: Chronotopic Structure of Intersubjective and Intertextual Communication

So, according to the "chrono-topic" structure of human meaning by Bakhtin, and to the "semiotic" nature of human space in permanent process of poetic "translation" between places, and between places and languages, architecture is a machine of thinking. A sociophysical "archi-geometry" that "thinks", with a chrono-topic structure.

This chronotopic structure has two main ways to exist: the "peripateia", or the space and time representation of events, and the "recognition", or the social interaction materialized in objects as "masks" or as socio-physical "transparencies" (14). The combination of these two ways of representation builds up all architectural chronotopes.

3. Towards the Semiotic (Dialogical) Intelligibility of Architecture: How Matter Thinks in a Global World

The overlapping of the "trace" and the "mask" is, then, the "empty place" ready to be filled in. John Heyduck has been perhaps the architect who best understood this difficult, or "dark", thought (15). Let us analyse a case through the design by the late Catalan architect Enric Miralles of an archeological site in Thessaloniki, in Greece. (Never built).

As in Gaudi this design by Miralles is a trace because it is a mask, and it is a mask because it is a trace. The phenomenological quality of space, as Pierre Kaufmann pointed out a lot of years ago, was already a first indicator of this power of architecture as socio-physical dialogical tool, able to give social meaning to a physical form, and physical form to a social meaning. Architecture is a "brain", then, but a very different "brain" of our mind (the architecture of the brain), or our social urban laws (architecture of a social group) (16). This design by Miralles is a socio-physical object to be built and used. The intelligibility between building and dwelling is what semiotics of architecture should uncover in a single universal way. There is no basic contradiction between global and local, on the contrary, both are needed for development, as this design by Miralles indicates. The contradiction is between what I have named "specific modernity", made of single universal events, and "monological modernity", a standard, homogeneous global way of living, where there is no place for the difference (17).

This work by Miralles (see figures) is a good "practical" example of the universal intercultural and intertextual roots of a single specific and unique project of an object: an island for and archeological center in Thessalonika, in Greece. Biblical narrations, icons from the XII century and from Picasso's works of art, are combined with the urban history of Greece thanks to geographic and historical "traces" or "masks" culturally significant. The result is a clever poetic and rhetorical artifact with spaces totally embedded by these meanings. However, if this can be directly appreciated by "connoisseurs" of the architecture of today, this is not self-evident, on the contrary, as Vitruvius indicates it needs explanations, needs "significations" in order to be understood. In Diagram II, the articulation between language and time on the one hand, and architecture and space, on the other hand, is stated thanks to the "crossing" of "writing" and "designing". It is a very close position to the one defined by E. Husserl in the Origin of Geometry (18), with the subtle "transcendental" definition of geometry as the "horizon of living" (or "place", in my terminology). The structure of this "horizon" is made of progressive "chained" (following the translation by J. Derrida) (18) real and virtual qualities of geometry, by an enigmatic procession of "reduction" of the difference between the "end" and the "origin",

some kind of "Rückfrage" (Husserl), that is a "question" towards the beginning coming from the future. We are not far from Plato when he defined the "Khôra" in *Timaeus* (4).

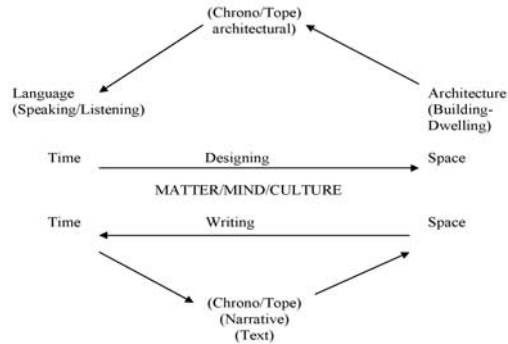


Diagram II: How Matter Thinks, and Places are Written as Texts, or Texts are Designed as Places

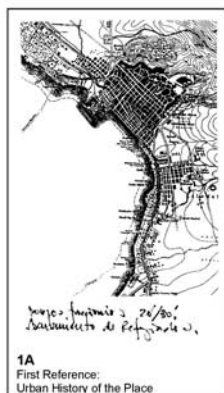
We arrive, then, to the point, where "chrono-topic" "chains" are the answer to the E. Husserl question about the "quality" of this "chained" existence of geometry. Architecture as "archi-writing" is what architects do with design, as in the example by Enric Miralles.

The chrono-topic built "chains" of architecture and the chrono-topic written "chains" are two faces of the same coin, as Paul Ricoeur repeats again and again in his last book (5). Our thought cannot be "represented" with one unique kind of signs. We think with our unique brain but we write with several "hands": language, architecture, music, etc. Each of these "hands", however, should represent the global and local power of our mind and our culture. Men convert matter in space and time, but they are not able to represent neither the global, nor the local, only the "chronotopic" texts, building, symphonies. Is it not enough? In any case, it is what we have.

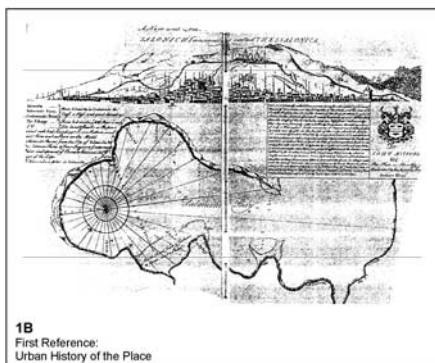
Barcelona, Christmas, 2003

Notes

- (1) In a letter Lewis Mumford sent to me he stated: (6-7-1981) "*What I have written fifty years ago, has recently found a new audience in the new generation (...) this gives me great satisfaction (...)*"
- (2) See text by Paul Ricoeur in *Arquitectura y Hermeneutica*. Original in French, and Spanish translation, in *Arquitectonica* n. 4. Edicions UPC. Barcelona. 2002.
- (3) This is the main topic of the III International Congress: The Architecture of In-Difference. Barcelona June-July 2004. Universitat Politècnica de Catalunya.
- (4) See Muntañola, J.: "Hermeneutics, Semiotics and Architecture: *Timaeus* Revisited" in *Semiotics Around the World*. Mouton & Gruyter. New York. 1997. (There are expanded versions in Spanish, Russian and Polish).
- (5) Mostly, Ricoeur, P. *Memoire, Histoire et Oubli*. Seuil. Paris. 2001.
- (6) Piaget, J. *Etudes Sociologiques*. Droz, Geneva. 1967.
- (7) Op. cit. note 2.
- (8) Muntañola, J. *La Topogènesis*. Anthropos. Paris. Spanish translation *La Topogènesis*. Edicions UPC. Barcelona.
- (9) Bakhtin, M. *Art and Answerability*. University of Texas Press. 1990.
- (10) Clocksin, W. "A Narrative Architecture for Functioning Minds: A Social Constructionist Approach".
- (11) Muntañola, J. op. cit. note 8.
- (12) Piaget, J. *La Formation du Symbole chez l'Enfant*. Delachaux et Niestlé. Neuchâtel. 1959.
- (13) Messori, Rita. *La Parola Itinerante*. Mucchi Editore. Modena. 2001.
- (14) Hays, K. M. "Hejduk's Chronotope", Princeton Architectural Press. 1996.
- (15) Muntañola, J. *Arquitectura, modernidad y conocimiento*. Edicions UPC. Barcelona. 2002.
- (16) Muntañola, J. *Arquitectura 2000: Proyectos, territorios y culturas; Architecture 2000: Projects, Territories and Cultures*. Edicions UPC. The *Arquitectonica* serie number 10. 2004.
- (17) See op. cit note 8, last part.
- (18) Husserl, E. (Volume VI *Husserliana*) *L'Origine de la Géométrie* (translation, and introduction in French, longer than the text by Husserl, by J. Derrida) P.U.F. Paris 1962. (original manuscript in German by E. Husserl in 1936).



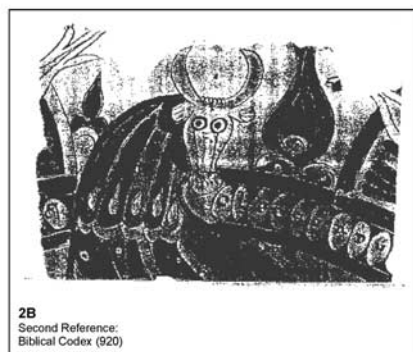
1A
First Reference:
Urban History of the Place



1B
First Reference:
Urban History of the Place



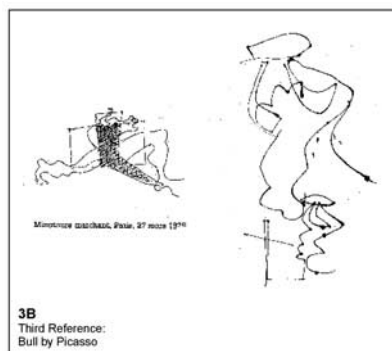
2A
Second Reference:
Biblical Codex (920)



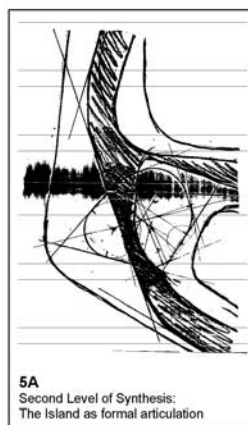
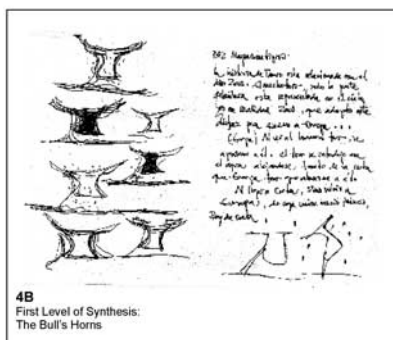
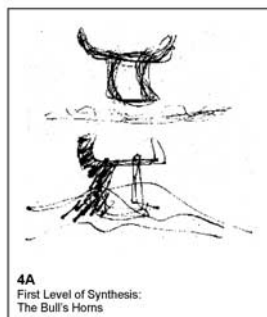
2B
Second Reference:
Biblical Codex (920)



3A
Third Reference:
Bull by Picasso



3B
Third Reference:
Bull by Picasso



Annex 3

Architecture, Education and Social Dialogy

Josep Muntanola Thornberg. Architect

1. Introduction: Mind, Land and Society

The relations between architecture and education are numerous and complex. What is normally studied is that of the architecture of the educational institutions. Without wanting to offend anyone, this relation is not the most important one of this subject.

In fact, in many books and articles (1) I have shown that the relations between mental development, social development and territorial development are fundamental both for architecture and for human culture. Architecture is, actually, the articulation through a design between history (social development) and geography (territorial development). I will try to select the fundamental aspects of this complex interaction as a base of the analysis of an education that is sensitive to architecture. The French philosopher Paul Ricœur has been the first to formulate the philosophical base of a spatial hermeneutics that is useful for the educator (2).

2.1 The Chrono-Topo of Bakhtin and the Education in Architecture

The "chrono-topo" conceived by Mikhail Bakhtin as a device to analyse the dialogical structure of literature in its different genres, was already implicit in the poetics of Aristotle, even when Bakhtin only admits an origin at a conference on the biological clock by a notable Russian biologist at the beginning of the twentieth century.

In fact, the "peripecia" and the "recognition", and their excellent poetic relation, which Aristotle establishes between both poetic "catastrophes", are already the basis of the "chrono-topos", and the origin of any possible socio-physical chrono-topo. A "chrono-topo" (time and place) is in Bakhtin generated through a narrative affinity or specificity of any literary genre. This affinity is built by two solidary aspects: a) a specific manner of organizing space and time of each literary genre in every historical moment, b) a specific social "figure" of one or various characters with a precise identity of: adventurer, heroic couple, man in the street, etc. (developing also in time).

But, above all, the "chrono-topo" articulates these two aspects permanently, and it is its articulation that marks the most "intelligible" of narrative in each specific case, which can be from an only work to the development of a literary genre through thousands of years.

We are before an instrument of dialogical analysis placed between poetics and rhetoric, historical reality and artistic work. Bakhtin insists again and again that the "chrono-topo" measures and makes intelligible in which way a work "represents" reality. Bakhtin says: I am amazed to see with which precision the "chono-topic" structure indicates how a work of art comes to represent reality. " (From fiction, obviously).

Put in another way, what the socio-physical "chrono-topo" will uncover is the affinity between space-time and social action, or the social interaction between characters, social characters or protagonists, or heroes, which Aristotelian philosophy described with the term "recognition", "Recognitio", or discovering that one character is another, or that I am different than I thought I was, etc.

This "affinity" is the base of any culture, and it is what obtains both the poetic catharsis and the rhetoric persuasion. It is what allows the reader or observer to participate in the social and space-temporal plot of the literary work, and they are not confused or lost too much on their "trip". This is what allows us to distinguish between tragedy and comedy, and between lyrics and epics. In architecture, as we will see, this device has different applications, but, in no case, as warn Bakhtin, architecture will behave as literary work. The whole work must be redone.

In different research experiences I have been able to see the decisive influence of school education in the conception of architecture and urbanism ideal to live in (3). The relation between the socio-physical experience at school and the culture of space is scientifically very important. But I do not refer to the experience of the physical space of the school building or to the experience of the space of the city, nor to the farm schools at summer camps, etc., but to the quality of dialogical education from theater, music, educational projects in urban history, ecology, etc., as long as the following conditions are fulfilled: a) Interaction between sexes: boy/girl. b) Interaction between different age groups (better if mixing sexes). c) Interaction according to calendar: traditional celebrations, school festivals, with fixed "roles" every year at different grades, ages or sexes.

The socio-physical, educational chrono-topo is generated, this way, at the school, from a social model of the city, with fixed cultural architectural articulations between the physical and the social, as, for example, that more construction means more money, that the old urban centers of the cities are poor and of little "modern" interest, etc., which are arguments that define the architectural culture at each school.

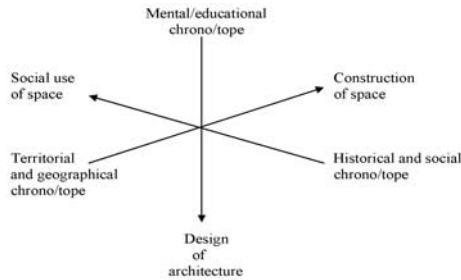


Diagram I: The triple nature of the social-physical chrono-tope

2.2 The Historical-Social Chrono-Tope

There are many works and doctoral thesis on the correlation between social behavior and the form of the city, specially in urban history in times prior to modernity (4).

We can see how the space-temporal order of the uses in the cities is defined by culture, and, therefore, a change in religion, in family structure, etc. affects the use of urban forms.

On the other hand, from the Archive of the Urban Form of Catalonia (5), it has been possible to analyse the cultural richness (chrono-topic) that represent the thousands of medieval Catalan villages that still exist, where their "architectural form" allows to "read" cultures from a process reverse to that of the educational chrono-tope mentioned above.

The creativity and the cultural value of the historical urban forms can only be understood from the detailed analysis of each village, because there never are two villages with the same chrono-tope.

In connection with contemporary urbanism there are also new studies that show the enormous chrono-topic difference between urban areas apparently physically the same, but totally different architecturally. As for example the studies on urban areas close to the lake of Geneva, in Switzerland, pointing to the easy question: What do you do when you run out of sugar at 8 p.m. (Do you go to your neighbor, to the Super, to the local store, etc.). With this we are able to see very important socio-physical chrono-topic affinities, as are: The type of relation between neighbours, the preference to take the car, train or public transportation, or the preferences to go to big or small stores. Contrary to what we could expect, globalization does not produce homogeneity, but great chrono-topic heterogeneity.

2.3 The Geographic-Territorial Chrono-Tope

In Diagram I we can see how the mental, educational chrono-tope orients itself to the design of architecture, as articulation between history and geography, and how the two chronotopes, the historical and the geographic, refer to respectively, preferably, social use and building of the land.

If the mental chrono-tope (design) relates use and building, and the historic (dwelling) relates building and culture, the geographic (land and building) closes the hermeneutic circle, articulating use and culture. Therefore, changes on the land produce a progressive change of use and of its relation with culture. Architecture (and urbanism) are in this manner ways of preserving and/or destroying, and/or transforming cultures.

The land acts as an immense socio-physical calendar in which each form, each geographical feature, each built wall, determine possibilities of use. Its chrono-topic power depends on the cultural capacity of imagining uses and behaviors, no matter what the reference theory is, from Neolithic cosmology to modern "avant-gardes", passing through the medieval guilds of the building of cathedrals.

To move from design to use, building is a necessary step. Therefore, the essential function of the geographic, cosmic chrono-tope is that of articulating the mental chrono-tope with the historic-social one. When it is not obtained, design and history remain isolated, and the urban chrono-tope disappears, is dissolved: there are not relations between the social and the physical beyond the fortuitous or the arbitrary.

Another perspective would be anthropology: between total nomadism and total sedentary lifestyle, the geographic chrono-tope establishes a certain equilibrium between movement and stillness, that is the base of any architecture of the land, which, as a giant clock, sets some invisible, but existing, space-temporal limits from any building.

Finally, let us say that any science has the word here from socio-genetics to bio-genetics, from geology to ecology. The "chrono-tope" of building covers all "cosmic" time, and, therefore, it is the very life that allows mental and historical development, and from here stems the persistent interest in the human body as "measurer" of architecture. (Leonardo de Vinci, etc.).

From the "natural" land to the most sophisticated cities of today, building establishes a physical cosmic space-time that makes a bridge between mental time and historical time. In here lies its strength.

3. Architecture and Social Dialogy

In 1973, almost exactly thirty years ago, when I published my first book, I indicated a few authors that had looked into the "dialogic" nature, that is, environmental, of pedagogy (6).

Today there are not many more, even though the influence of the ecological "environment" has increased spectacularly and, to a smaller extent, the historical-social "environment".

But the core of the problem of the profound relation between architecture and education is still obscure. The work by Bakhtin, and also the work by Jean Piaget, have opened to us enormous possibilities of improving our pedagogy from a dialogic-constructive perspective, or of interactive pedagogy. We only need, in this context, to uncover the content of this dialogic relation between architecture and education.

When a village, for example, modifies the architecture of a public main square, it is possible to establish a pedagogy from a dialogical perspective.

First, this perspective obliges us to analyse the change of the public square to know what has changed in the social interactive behavior, between ages, sexes and cultures. Because I suppose that it is very clear: changes in space modify the possibilities of social interaction between sexes, generations and cultures.

Second, it is necessary to reflect on losses and gains of the change. For example, losses of visual transparency of the landscape, losses of functional connection with the fountain, the river, etc. Gains: in the comfort of the new apartments, in security, illumination, etc. (if any). It is important especially to analyse the new social and cultural interaction in relation to the previous. This must be valued with utmost precision. (School-family relationships, grandparents-grandchildren relationships, etc.).

Third, it is necessary to develop alternatives to the built design: Would another building have been possible? Is the public square the best place for the new building? Etc.

With this little example, I would like to indicate that it is not necessary to teach architecture from the world history of styles. In fact, that will be of little use. Any transformation of space close to the life of children can be of enormous educational repercussion if analysed in the light of the critical law of the "chrono-topos", and of the profound affinity between changes in space time and changes in social interaction. A teacher of young students said to me that this type of pedagogy was very dangerous, because it obliges to a radical and deep critical-social reflection. I answered her that I did not know why she would like to be educator of adolescents, if she did not accept this reality of social space as container of inter-generation, inter-"sex" and inter-cultural dialogy.

I will resume again what is essential in my deductions: if the fact of living and "being educated" among "humans", young and old, Muslims and Catholics, men and women, Japanese and French, etc., were not a decisive factor in the development of intelligence (scientific, ethic and esthetic), then everything I have said on space and architecture would be wrong. But it is a decisive factor, because the "wild" children of monkeys, bears, wolves, etc. do not develop correctly, they do not have the "chono-topic" and socio physical sensitivity that is specific for our species, and that we must educate, cultivate and promote. That is all I wanted to say (7).

Notes

- (1) Topogénesis. Edicions UPC. Barcelona. 2000. (Edition in French in Anthropos. Paris. 1996. Edition in Italian, in press).
- (2) See article, until this edition unpublished in Spanish, by Paul Ricoeur in *Arquitectura y Hermenéutica*. Edicions UPC. Barcelona. 2002. The ARQUITECTONICS Collection.
- (3) See: *Barcelona evaluada por sus núcleos*. Ajuntament de Barcelona. Institut d'Ecologia Urbana. Barcelona. 1992. (Texts in Spanish, Catalan and English).
- (4) For example, Magda Saura Carulla: *Pobles Catalans/Catalan Villages*. Edicions UPC. Barcelona. 1998.
- (5) This archive of research is at the National Archive of Catalonia (Sant Cugat. Barcelona). More than 30.000 plans.
- (6) *La arquitectura como lugar*. Ediciones Gustavo Gili. 1973. Second edition in Edicions UPC. Barcelona. 1994. Third edition in Alfaomega. Mexico. 2001.
- (7) A more detailed version of education in architecture can be found in my discourse of admittance to the Reial Acadèmia Catalana de Belles Arts de Sant Jordi, 18 December 2002 with the title: *L'Arquitectura, es pot ensenyar?* (Architecture, Can It Be Taught?).

Annex 4

The Child In The City: Towards a Dialogical Model of Children-Environment Relationships

Josep Muntariola Thornberg. Architect

1. The Chronotopic Dimensions of Architecture

In the last thirty years I have been working with children in a definition of architecture as a dialogical intersubjective cultural environment (Muntariola, J. 1997). Along this rather long way, I have analysed excellent research works by R. Hart (1979), J. Valsiner, R. van der Veer (2000), and P.B. Baltes (1996), even though there are hundreds of works gathered in long bibliographies (Muntariola, J. 2004).

As conclusion, I am more and more convinced that the key point of the general research field of developmental psychology and architecture is the notion of "interaction of minds" both from psychogenetic and sociogenetic perspectives (Valsiner, J.; R. van der Veer) and, more specifically, the role that architecture plays between these two developmental perspectives.

In my own experiences with children (see diagrams II to VI), I have noticed this psychosocial role of architecture, and that the structure of the environment conceived by children is chronotopic in nature, following the definitions by the Russian anthropologist and linguistic Mikhail Bakhtin (1990), and also the findings by L. Vigotsky. The chronotope is at the core of our cultural artefacts such as books, paintings and buildings, trying to make a clear distinction between these cultural objects and the machines and tools, which are also cultural, but not chronotopic. But we can go all the way around, and say that everything related to man is chronotopic, but that in the case of machines, the chronotope is monological and not dialogical. For the difference between monological and dialogical, besides Bakhtin, J. B. Grize is an excellent guide (1983). The following text by Bakhtin defines the chronotopic structure of man's cultures.

"In conclusion we should touch upon one more important problem, that of the boundaries of chronotopic analysis. Science, art and literature also involve semantic elements that are not subject to temporal and spatial determinations. Of such a sort, for instance, are all mathematical concepts: we make use of them for measuring spatial and temporal phenomena but they themselves have no intrinsic spatial and temporal determinations; they are the object of our abstract cognition. They are an abstract and conceptual figuration indispensable for the formalization and strict scientific study of many concrete phenomena. But meanings exist not only in abstract cognition; they exist in artistic thought as well. These artistic meanings are likewise not subject to temporal and spatial determinations. We somehow manage however to endow all phenomena with meaning, that is, we incorporate them not only into the sphere of spatial and temporal existence but also into a semantic sphere. This process of assigning meaning also involves some assigning of value.

But questions concerning the form that existence assumes in this sphere, and the nature and form of the evaluations that give sense to existence, are purely philosophical (although not, of course, metaphysical) and will not engage them here.

For us the following is important: whatever these meanings turn out to be, in order to enter our experience (which is social experience) they must take on the form of a sign that is audible and visible for us (a hieroglyph, a mathematical formula, a verbal or linguistic expression, a sketch, etc.). Without such temporal-spatial expression, even abstract thought is impossible. Consequently, every entry into the sphere of meanings is accomplished only through the gates of the chronotope." (In: Bakhtin, M. *The Dialogical Imagination*, University of Texas Press, 1981).

So, architecture has a chronotopic structure by linking the space/time cultural qualities of a built environment with the social interaction acting in this same environment. So, through their chronotopic structures, architecture conveys social meaning, and the architectural forms relate psychogenetic development and sociogenetic development (see diagram I).

This relation is made neither in the "real" world, nor in the "virtual" world, but in the way the latter represents the former, as Bakhtin himself insisted upon.

This chronotopic structure of the human culture developed by Mikhail Bakhtin is an extraordinary tool for our purpose of linking mental development, environmental design and social meaning of architecture and urban planning.

In diagram I, I have shown the three dimensions of architecture with its chronotopic structure: mental, environmental and social (Muntariola, J. 2002). The mental and the social chronotopic structure was analysed by Bakhtin himself in detail. At a mental level, children always articulate physical space and time, with social space and time, so they have a chronotopic mind. At a social and historical level, we have books, stories and chronotopic cultural rites and myths. As Shirley B. Heath (1983) has shown, each social group and each cultural social structure, has its own way of telling "stories," and this same way impacts the whole life of the persons and the manner they communicate with each other.

However, a chronotopic analysis of architecture has not been clearly stated. Exceptions are L. B. Alberti in the XV century, a

proto-Bakhtinian, or Robert Venturi in the XX century. As I have described in a lot of publications the chronotopic structure of our environment, nevertheless, is difficult to understand because we tend to analyse our environment throughout its permanencies instead of its changes (Muntañola, J. 1996).

Environmental changes of form throughout history, changes of thresholds, that is of transitions between private and public use, thresholds between nature and culture, inside and outside the city, inside and outside countries, limits, barriers, etc.: these are the chronotopic elements that we need to relate with mental and social development. Children "know" perfectly well that it is this "threshold" quality of our environment that matters (see diagram II). To "move" and to "look at" are the basic elements of architecture and urban planning, both coincide in one "door," and they divert in a window to look at (without movement) and a "tunnel" (to move without looking at). Our environment can be analysed as a system of "thresholds," throughout them our bodies are "chronotopically" articulated (Ramirez, B. 2000). As Jaan Valsiner indicates we are, simultaneously, fighting against this system and we are attached to it. We have a living relation to it: birth and death are then environmentally linked (Valsiner, J. 2003).

The chronotopic relationships between mind, land and society can only be detected, as I have indicated above, if we look to changes, that is, to environmental, mental and social transformations in time. If we look at permanent physical forms, without changes, it is very difficult to understand the complex interrelation between mental attitudes and expectations, environmental degrees of satisfaction and social adaptation to urban planning policies. On the contrary, if social expectations are rewarded by environmental forms that responds to them, mental ideas, concepts and images develop attached to this process. This developmental model holds with the paradigmatic ideas by Jean Piaget about experimental behaviours for survival between the organisms, species and the common environment. This is a much more exact representation of reality than a pure Darwinian model or the Lamarckian contextual determinism. Neither chance, nor spontaneous genetic casual innovation can replace these experimental behavioural patterns the success of chronotopic cultural strategies in books, cities or music, arises from this same attachment to survival.

Each of the five diagrams gathered here (diagrams II to VI), about children's architecture, that are the result of diverse experiences, take a chronotopic form, where the space and time structures of our environment are closely related with social relationships. But, how "closely" are these chronotopic entities working? J. Valsiner in his book takes a surprising stand when he defines the role of the environment in man's behaviour:

"Human beings relate to any physical setting (natural or artificial) in which they are located by way of simultaneously being part of the setting and distancing from it..." (Valsiner, J. 2003, page 119).

This position of Jaan Valsiner looking at the environment as a "mediated place," is, to my opinion, in agreement with my findings on children's conception of places and Mikhail

Bakhtin's vision of "architectural" structure of ethic intersubjective relationships:

"The highest architectonic principle of the actual world of the performed act or deed is the concrete and architectonically valid or operative contraposition of I and the other. Life knows two value-centers that are fundamentally and essentially different, yet are correlated with each other: my self and the other; and it is around these centers that all of the concrete moments of Being are distributed and arranged. One and the same object (identical in its content) is a moment of Being that presents itself differently from the valuative standpoint when correlated with me or when correlated with another. And the whole world that is unitary in content, when correlated with me or with another, is permeated with a completely different emotional-volitional tone, is valuatively operative or valid in a different way in the most vital, essential sense. This does not disrupt the world's unity of meaning, but, rather, raises it to the level of a unique event." (In: Bakhtin, M. *Toward a Philosophy of the act*. University of Texas Press, 1993).

2. Dialogical Development of Children's Conceptions of Places to Live In and the Role of the Architect as a Chronotopic Socio-Physical Designer

Children know that places are mediators between nature and culture, physical and social dimensions of life, and between space and time qualities of our culture and the social meaning of these "qualities."

The dialogical quality of architecture fits exactly with this behaviour of children and children development in cities. Everybody knows that children enjoy "stories," based on chronotopic enplotments with poetic and rhetoric qualities. However, just a few persons know that human space uses chronotopic articulations too. In diagrams II to VI the chronotopic structure of places to live in is clearly established. For instance, each school "projects" into the ideal city it builds the dialogical enplotment among the social group of children from the school. They do not conceive simply a space and time physical architectural model, but they attach to it, specific social meanings. In relation to diagram I, it is the mental, "educational," prefigurative chronotope that is in this way represented, where the architectural form, or design, articulates physical and social dimensions of human life.

In some PHD theses about the social attachment of physical forms of a city, history shows the same chronotopic dimensions. However, this time it is the refigurative values of culture that link culture and place. The more the social costumes are homogeneous, the more the space and time rhythms and structures are the same. Marriage, death, women roles, etc. define the way

spaces are used in specific times and with specific space and time paces.

This is the historic and social "refigurative" chronotope in diagram I (F. Mezghani 2002).

What is then the role of the "configurative" chronotope built in our territories? The way Jaan Valsiner describes this role that I have just mentioned is perfectly possible: The environment defines scales, distances, transparencies, opacities, etc., and the space and time structures are in this case "built," "configured," in order to attach to this same configuration the social interactions and social emotions, meanings, etc., children "explore," comparing and checking "inner" prefigurative projects with "outer" social refigurative values.

In conclusion, the built environment is the result of our "project" (or prefigurative dimension of architecture), and is simultaneously the constraint for one "affordable" refigurative historical environment. We are, simultaneously, as Jaan Valsiner indicates, the owners and the slaves of it. We transform the environment and we are constrained by this transformation.

Let us follow now the diagrams II to VI. Diagram II shows the general development of children's conceptions of places to live in, where the space and time conceptions develop simultaneously with the social co-ordination of actions, roles and family ties. It is important to notice the increasing role of "empty spaces" where the space and time conceptions and the social interactions attached to it can be related at a higher level of chronotopic complexity. I have described the different epistemological aspects of this development in several publications (Muntañola, J. 1996, 1997).

In diagram III, I describe the developmental correlations between time and space concepts in children's conception of places to live in. (Muntañola, J. 1980a, 1996). This is a key point in the chronotopic structure of architecture and urban planning: without this space and time correlation the sociophysical articulation, both at psychogenetic and sociogenetic levels of development, is destroyed. This is a developmental dimension that can also be analysed throughout psychoanalytical research, and through psychiatric studies (Muntañola, J. 1980; García, B. 2004).

Diagram IV shows developmental changes, through graphic representations of social interactions in relation to places and bodies. In relation to diagram II, we can see a progressive "detachment" between body and place, thanks to an increasing representative power of the mind. Places have "legs", bodies have "doors" until three years of age, after that bodies and places have specific "chronotopic" roles: mother in the kitchen, father in front of the television, and finally "history," and "story" related to places, as in adult urban history "stories." The French philosopher Paul Ricoeur is the best analyst of the great significance of these body-place interactions: that is, first, our body as a "cosmic" natural object, second, as a social body related to the other's body and, finally, as a mental "subject," aware of himself. These are the three existential dimensions of human life and of human environments (city, buildings, landscape) too.

Diagram V compares two different places "socially," built by two different schools in Barcelona in 1990 (Muntañola, J. 1992). The first school (A) is what I describe as a "monological chronotopic school." No social interaction, no dialogue between children, no dialogue between behaviour, verbal expression and urbanism and architecture. School B, is what I have called a "dialogical school." Places have chronotopic significance, both visually and verbally in nature. Boys and girls interact roles and they interact with boys and girls of different ages. Forms reflect culture, not only business.

Diagram VI shows in parallel the main historical (sociogenetic) stages of chronotopic development by Sigfried Giedion, known historian of architecture (Giedion, S. 1964) in his posthumous work: *Architecture and the Phenomena of Transition*, with the main psychogenetic stages of diagram II. All kinds of considerations should be taken into account. We know from Jean Piaget's works, that sociogenetic place development does not follow the same stages that psychogenetic development. The social mind (Valsiner) does not follow the same developmental track that individual minds do, neither at geometric level nor at social, representative or behavioural aspects of development. Sociogenetic development needs representation first, psychogenetic development is mainly functional and modelisation (languages) oriented. I cannot go into detail here, think, however, just about phylogenetic and ontogenetic developmental differences, and you will have a fair good example of these developmental conflicts.

However, this ambitious book by Giedion shows a key aspect of "topogenesis," that is of the different stages of architectural development in human history as socio-psycho genetic structures. Giedion asserts that some transitional historical stages: Roman Empire, Modern Architecture, etc. mark a change on the chronotopic dimensions of the built environment. These changes affect the inside-outside relations of all the places built before and after, and affect the social interactions in relation to space and time too. As I have said before, this is not a strict psycho-social parallelism in time, but a first attempt in history of sociogenetic analysis of architectural historical stages. As I have analysed in other papers, the geometric development has a "chronotopic" reversal between psychogenesis and sociogenesis. That is, children follow a topo-projective-Euclidian order of epistemological development, and societies follow just the reverse order: first Euclidean, second projective, last topological. This is a very important fact, because if the psycho-social geometric processes were strictly parallel, men would have one unique global culture (Muntañola, J. 1996).

In conclusion: architecture and urban planning produce environments, buildings and cities that have a chronotopic structure by linking space and time with social representative interactions basic for survival. These chronotopic cultural affiliations between the mind (psychogenesis), society (sociogenesis), and land (topogenesis), (see diagram I), are always changing, however we can easily see invariants and permanences. And we should never forget that chronotopes articulate reality with virtuality. These invariants for survival can be analysed through the cognitive, ethical or aesthetical dimensions of human life, as

M. Bakhtin intended to do. It is not an easy situation to analyse, but we cannot reduce its complexity without destroying life altogether too with that "reduction." From a simple stone in our garden to the most complex city, the socio- psycho- physical game is open to play: Who knows the rules?

3. The Critical Developmental Dimensions of the Dialogical Human Chronotopes

The works by the English architect Bill Hillier (1996) uncover these chronotopic dimensions of our environment as a socio-physical "enplotment," in several examples about the chronotopic positive or negative articulation between a new neighbourhood and the new users according to if the "expectations" (mental project) of these users can be "plotted" to the historical characteristics of the new neighbourhood (refiguration). The cultural dimensions of these expectations are very important. Other studies concerning the lake of Geneva, in Switzerland, have the same results: very close neighbourhoods contain extremely different socio-physical chronotopical characteristics, even though they look very similar. This is what diagram I predicted.

In terms of development, I have summarised the critical chronotopic challenges in diagram VII. Where the psycho-social crossing chronotopes are more "critical" is where the role of architecture and urban planning is crucial. Of course, these critical chronotopic challenges change with changes in mobility, or better, they are very sensitive to the equilibrium between mobility and quality of life in private spaces (or between nomadism and sedentarism). However, this equilibrium, and the social "mobility" dimensions, are both constrained by cultural characteristics of a given social group.

As Bakhtin advises, the chronotopic dimensions of human life form "webs." He was one hundred years in advance of our social life "on the webs" of today. Internet is just a "photography" of this web of webs, and there are millions of "photographs" (see diagram VIII).

Nevertheless, these chronotopic webs are neither homogeneous, nor continuous, they have functional discontinuities that can destroy human personal and social development.

Globalization is a huge machine that can destroy specific cultural chronotopes (Rapoport, A. 2003), but it can help the development of new valuable cross-cultural chronotopes too.

But nothing justifies, for instance, the aggression and violence against children, and the critical psycho-social chronotopic "knots" in diagram VII are warnings about something that can be dangerous if it is not fast corrected.

The destruction of chronotopes has three different origins. First a physical origin, or pollution and contamination; second a psychic origin, or stress, mental disturbance; and a social origin, from war to cultural aggression, marginalization, etc. However, in diagram VII can be seen how a deadly "cocktail" between those three different origins are far more dangerous than the impact of one by one. In relation to the physical origin of health hazards in "mad-cows," cancer-radiation scenarios, it is easy to see the lethal combination between social control of information and physical danger, resulting in a huge chronotopic destruction of health, of landscapes and villages, etc. Most of the time, these scenarios take a lot years to develop, so it is a matter of generations.

However other key developmental chronotopic cases are easier to solve, for example, (see diagram VII) the noise that prevents babies to develop verbal language aptitudes because they cannot "hear" mother's and father's words. High levels of noise can be fatal for babies' development and for depressive or highly emotive "minds."

Other levels of analysis, in diagram VII, show diverse catastrophes, as the lack of experience of socialisation of children when they cannot play with mates near home or a home, or the excellent analysis by P.B. Baltes in relation to senior citizens and social policies with the elderly. These are social chronotopic conflicts related to the physical environment, but we can immediately see that it is the psycho-social chronotopic knots that develop more critical developmental problems. Terrorist attacks are now an important factor of critical underdevelopment as a permanent situation of war is.

The socio-psycho-topogenetic combination behind the chronotopic changes produces sometimes strange results, as the fact that suicide rates are higher in rich societies than in traditional environments, or that these environments can be better for children than more "modern environments, in relation to social interaction, etc. We should be very cautious at this point, because we can arrive to two wrong conclusions, either that architecture and urban planning are irrelevant for cultural development, so then we justify speculation and cultural demolition of the physical environment (both natural and artificial), or, on the other side, that "good" architecture and urban planning, "changes" behaviour and social interaction with some "cosmic" force or mysterious energy.

The chronotopic critical points described in diagram VII are neither magic, nor "natural," but social, mental and physical altogether. It is the combination of physical, mental and social energy that gives human character to children's lives and to the life and death of chronotopes.

We can feel at home in very far away places and do not feel at home in some places of our own country. This chronotopic dimension of our lives, as Mikhail Bakhtin indicates, makes us "dialogical" animals. Then each new object: computer, car, TV, new home, enter dialogically in our physical, social and mental lives, the result can be a chaotic structure, or the construction of a chronotopic, more or less, new, "socio-psycho- topogenetic" attachment, and life follows...

In conclusion, architects should carefully look to the children's conceptions of places to live in, if they want to design and build healthy environments. The thresholds between public and private places, between natural and artificial objects, between high

and low buildings, between noisy and quiet places, etc., are the key environmental and developmental factors. Our chronotopic mind link these key factors with social meaning, social survival and inter (and ultra) generation social relationships.

We cross the physical and the social "thresholds" simultaneously in space and in time. The chronotopic dimensions of each culture (global or/and local) measure the kind of attachment we have to these space and time socio-physical situations, they measure the cultural quality of human life. Our environment works as a huge poetic, semiotic and rhetorical scenario where we must survive thanks to experimental behaviours. Sometimes we succeed to survive, sometimes not. Architects should take seriously the ethic responsibility they have in this interplay between environment and behaviour. Let me say that to push children to the sea by force is not probably the best way to teach them to swim. On the contrary, this is perhaps the best way to kill them.

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Webs

www.architectonics.com
www.edicionsupc.es/
www.upc.edu/pa/
www.corainfo.com

Web of Webs

Key webs for our topic in the diagram VIII. (English and Catalan versions)

Diagram I

The three chronotopic basic dimensions of architecture

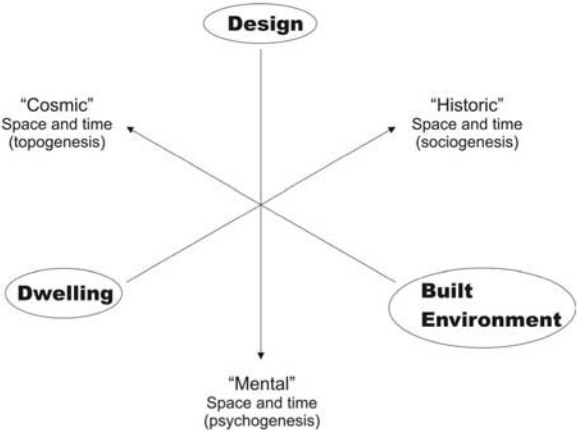


Diagram II

Psychogenetic development of children conceptions of places to live in

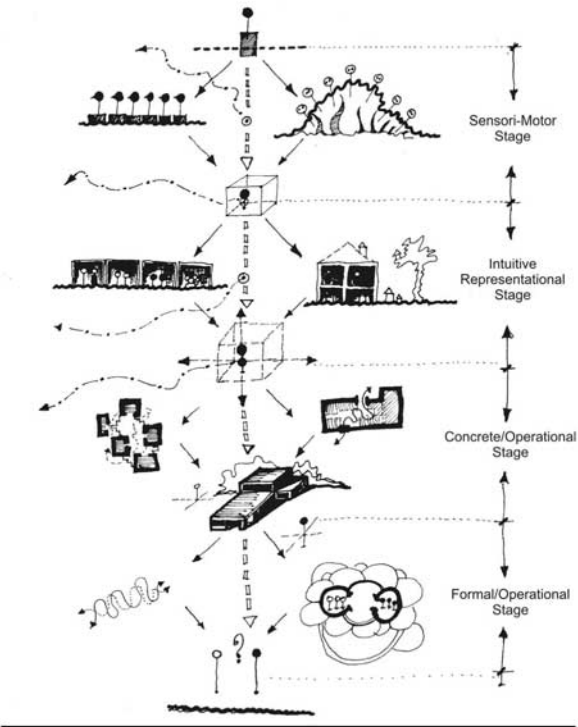


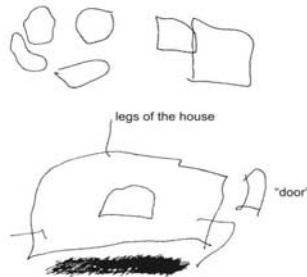
Diagram III

Space and time conceptual (chronotopic) correlations on the development of children's conceptions of places to live in

STAGE 0	PRESENTATIONAL CONCEPTION OF PLACES (0-2 years old) Sensori-motor experience only; there is no representation or evocation of places to live in.
PRE-ARCHITECTURAL ARTICULATION	
STAGE I-A	RITUAL TRANSDUCTIVE CONCEPTION OF PLACES (2-4 years old) Products: Massive non-empty places. Structure: Topology and symbology tied together through activities described; transductive reasoning.
FIRST ARCHITECTURAL ARTICULATION	
STAGE I-B	FUNCTIONAL PRE-OPERATIONAL CONCEPTION OF PLACES (4-7 years old) Products: Hollow single three-dimensional places. Structure: Topology and symbology tied together through identical characteristics among perceptual and sensori-motor qualities of places.
STAGE II-A	CONCRETE OPERATIONAL CONCEPTION OF PLACES (7-9 years old) (beginning) Products: Superposition of single hollow forms. Structure: Complex structures involving coordination between identities: embedding, rotations, etc.
SECOND ARCHITECTURAL ARTICULATION	
STAGE II-B	CONCRETE OPERATIONAL CONCEPTION OF PLACES (9-12 years old) (consolidated) Products: Hollow multiple places. Structure: Topology and symbology tied together through the concrete transformations of the material using previous experience.
THIRD ARCHITECTURAL ARTICULATION	
STAGE III-A	FORMAL OPERATIONAL CONCEPTION OF PLACES (from 12 years old) (beginning) Products: Complex formal models. Structure: Simultaneous invention of a physical and social setting using topological-symbolic interaction, in which past experiences are equilibrated with possible future social situations.

Diagram IV

Development of children's representation of places to live in



Sensori/Motor
Stage:
A body-house



Intuitive/Representational
Stage:
Differentiation
between the body
and the house

Diagram V

Dialogical versus monological children's conceptions of places to live in



Monological cities built without any dialogue between children, sexes, age-range, public and private spaces, etc.



Dialogical cities with socio-physical dialogue between boys and girls, theatre and architecture, age-ranges, private and public, etc.

Diagram VI

Sigfried Giedion's historical stages of human architecture versus epistemological mental development by Jean Piaget.

Structural Sincronism between Historical Development of Architecture and Psychogenetic Conceptions of Places to live in

Historic Stages	Giedion Historic Stages	Common Features	Psychogenetic Stages	Body/age
Paleolithic	Pre-architecture	Itineraries equal forms built	Presentational Stage	Up to 18 months
	First architectural transition		Transductive Logics	
Up to Greece	First Spatial Conception: Exterior Relations of Volumes	Itineraries and forms articulated by simple topological forms.	Intuitive Stage	2-7 year old
	Second architectural transition		Operational Stages	
Rome	Second Spatial Conception: Interior Relations of Volumes	Itineraries and forms articulated by two level topological forms.	Concrete Operational Stage	7-12 year old
	Third architectural transition		Formal Topological Operations	
Modern Architecture	Third Spatial Conception: Relationships Between Exterior and Interior Spaces	Itineraries and forms articulated by complex level topological forms.	Formal Operational Stages	More than 12 years old
		Future ¿?		

Diagram VII

Some key critical chronotopic socio-physical dangerous events for a healthy development of the body and of the mind.

Critical Chronotopic psycho-social developmental problems.	Topo-genetic Dangerous. Scenarios.
<u>One and two years of age</u> Too much noise delays the linguistic abilities in relation to the brain maturation, because babies cannot identify adults sounds.	Neighboring areas where with high level of noise in streets, private and public places when social interaction with babies take place. War scenarios or repetitive terrorist attacks.
<u>Five to seven years of age</u> Lack or delay of abilities to socialize with other children. Too much TV and other "virtual" environments.	Neighboring areas without secure places to play near home/range with increasing freedom of movement with age, and children alone in private spaces without adults.
<u>Twelve to sixteen years of age</u> Lack of integration in social institutions. Deviant Behaviors and increase of violent attitudes.	City areas without institutions related to family structures. Lack of social policies and desintegration between educational working places.
<u>All ages</u> Systematically, the elimination of this dangerous product was delayed by a social, psychological and physical process of intimidation.	Asbestos or other substances contamination destroys physical, psychological and social lives for economic "developmental" reasons, not in one year, but surely over the years.
<u>Old-age</u> Isolated persons (both rich or poor) die without social aid because of strong wave of hot weather in.	Urban environments where private places are separated from public spaces, old people cannot access streets, shops, parks, etc.

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