

# Chapter 1

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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 Muntanola, 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 Bilsel, 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 Gökân**, 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 21<sup>st</sup> 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 Bilsel**, 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 1<sup>st</sup> year and Urban Design in the 5<sup>th</sup> 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 1<sup>st</sup> and 2<sup>nd</sup> 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 Muntañola, 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.