

ARCHITECTURE IN LAUSANNE, TEACHING AND RESEARCH: A CULTURE

“Sow a thought, reap an action, sow an action, reap a habit, sow a habit, reap a character, sow a character, reap a destiny.”

Ivan Antonovič Efremov, *La Nébuleuse d'Andromède*, Lausanne, Paris: Editions Rencontre, 1970
[translation of Harald Lusternik]¹

Training future architects by giving them a solid polytechnic background is the key role of the Section d'ARchitecture at EPFL: the Bachelor years forming a common base, the Master phase crowning personal development. Among other things, this supposes that teaching should implant a vision that embraces both the contemporary realities of architecture and its ancient roots. In a polytechnic culture, our discipline should be seen as an art and a craft, to be practiced with intelligence, passion, and experience drawn from many spheres of scientific knowledge.

Architecture has always been a complex activity, one that merges the three great domains of human knowledge and imagination that are science, culture and art. The architecture project calls for dynamic imbalance between all three, and the young architect has to forge a stance using technique, intelligence and a sense of poetry between all three to maintain equilibrium. This is why the general culture trunk of our teaching is devoted to discovering the basics of architecture. The great prerogative of architectural training is that it favours the humanities, and by this it differs from the purely technical disciplines, which from the outset demand specialized apprenticeship in their component subjects. For a trainee architect, the first year of basic training is a studio on the architecture project. The student is straight away immersed in his or her future discipline, introduced to the technical and cultural “tools of the trade”. This precedence given to the project and to the subjects and skills directly related to it is a treasure to be jealously guarded, nurtured, added to and shared.

A polytechnic architect must acquire solid intellectual skills and learn how to put them into practice, not just with consciousness and ease, but also with the sensitivity of his or her own talent. Excellence does not require mere expertise in manipulating forms and materials. It demands an independent spirit capable of drawing inspiration from personal feelings, able to bring to bear real life experiences, and give expression to original intuitions. To this end, affirming the principle that both poetic and intellectual dimensions must inform all architectural training, the AR Section at EPFL dispenses a thorough teaching of theory and history during the three Bachelor years, and has also launched a course entitled *Visions and strategies* at Master

¹ Aphorism attributed variously to Charles Reade, Ralph Waldo Emerson, George Dana Boardman the Younger and William Makepeace Thackeray... but which probably derives from an ancient Hindu proverb.

level. *Visions and strategies* is a set of lectures structured with a view to developing our students' awareness of the major issues facing architects today, which they will be asked to formulate in their theoretical statement during their final Master year.

The course focuses on theory and gives novices the cultural instruments that will enable them to hone their own way of seeing things and interpreting them. Organically, the project appears as an intellectual construction shaped by the instruments specific to architecture. What is more, throughout the two Master years this cultural vision of the project also underpins the structure of our *Orientations* course, which groups theme headings that address major issues surrounding architecture, and gives students the possibility of filling out their workshop project by a course in theory and experimental teaching.

The extraordinary richness of architecture is its liberty of expression, which is fed by the different cultures, visions, traditions and experiences that each and every practitioner brings to our profession. An essential corollary to this wealth and freedom is the principle of liberty in teaching – an inalienable value.

Teaching in the AR Section is organized in such a way as to reinforce specific characteristics, and this enables us not only to define the profile of each teacher, but also to valorize what each one contributes to the school. The introducing of *Orientations* at Master level thus fills a dual objective: first, orient students more clearly according to different theme headings (rather than the figure of a professor), and second, flesh out the cultural dimension of each theme by way of associated modules and teaching units.

Today more than ever, ensuring that the next generation of architects has a sound sense of ethics is vital to their training. This can only be done by nurturing an inquiring, critical spirit capable of facing the big issues of our day and age: sustainable urban development, the husbanding of materials, simplification of technique, interaction between traditional know-how and advanced technology, social compatibility, and in general the intelligent use of resources.

The specific characteristic of our school is that it awards Master's diplomas sanctioned by two tests: the theoretical statement and the Master project. Distinct by nature – one intellectual, the other practical – these tests guarantee their own validity and also enable adequate verification of each student's level of proficiency. Every candidate must complete, alone, both a study and a project of his or her own choosing.

Our training in architecture is then articulated around three main axes: 1) using and experimenting with construction techniques, 2) learning history and theory, and 3) acquiring an

expressive individual consciousness that is in phase with collective needs and aspirations. All three axes form an inseparable trinity: they cut across every architecture project and they carry the core of commitments and interests of all teaching programmes. In this way, the polytechnic architect's acquired skills are constantly verified within the project, an independent experience that marshals advanced techniques, human and social sciences, and the arts of expression. For the student, the project is the catharsis by which he or she experiments with and gives form to what has been learned.

By giving central priority to the project and its cultural dimension, the AR Section aims at qualifying future architects who are equipped with great intellectual independence, solid ethical principles, and a structured methodological approach. It must be made clear that a school of architecture at polytechnic level is not concerned with training skilled employees or draughtspersons, but aims at qualifying future architects who are capable of giving form to their ideas in an independent and informed manner.

Once again, let us repeat that poetic and intellectual dimensions must fill out – from A to Z – technical training; in a nutshell, this is the task of our AR Section.

As for research at the Institute of Architecture and the City, the priorities of its component laboratories go towards developing specific subjects and skills. Always advanced, it often reaches and overshoots limits in the five main fields of study that characterize it: 1) theory and history, 2) sustainable architecture and construction technologies, 3) art and architectural expression, 4) town planning, landscape, territory and society, and 5) the architecture project.

For those who are familiar with ongoing debate surrounding research in architecture, it is the last named field – the project – that raises the most questions, especially when the problem in hand is to define scientific content and value. Indeed, while the other fields of study may resort to tried and proven processes and methods, without detracting from the validity of their work, the architecture project as instrument, objective, or even as a content in scientific research has yet to gain a satisfactory recognized format and achieve an accepted degree of generality. Concerning this problem, mention should be made of a significant experiment recently carried out in our school and financed by the Swiss National Science Foundation (SNSF). It took the form of an interdisciplinary doctoral module entitled *ComplexDesign* and was directed by Professor Inès Lamunière, with the participation of the Universities of Fribourg and Neuchâtel for those aspects relating to law and economics. It was a ground-

breaking initiative not just because the efforts of researchers were directed toward the architecture project, but because it was accepted by the scientific community, as financing by the SNSF shows. The results lead us to believe that the design project *per se* will soon be recognized as an object for research, and – more important still – as an instrument for research in all respects.

Again, it is essential to recall the close relationship between research and teaching in the field of architectural project and the growing number of publications that aim at systematizing and generalizing the educational experiences carried out in the studios, beyond mere didactic opportunity.

As for the four other fields mentioned above, the number of financed studies – plus the publications and books they have given rise to – illustrate the vitality of our Institute and the pertinence and scope of its activities.

For history and theory, the many works published by Professors Gargiani, Lucan (now retired) and Marchand reflect an intense effort that covers several centuries in the history of architecture right up to the most recent trends.

For urbanism – especially its territory and society components – the laboratories headed by Professors Kaufmann and Lévy are busy expanding a vision of territorial planning that pulls together sociology and urban geography in a strong spatialized manner, perfectly coherent with the principles and objectives of our faculty.

As for technologies, construction and sustainable development, of particular note are the research projects under way in the laboratories led by Professors Andersen and Rey, in particular for their capacity to mobilize varied sources of funding, and in that directed by Professor Graf, which concerns itself with safeguarding modern heritage works and is responsible for a series of publications specializing in this field.

In all of these think-tanks, research is fed by the efforts of post-graduates working for their doctoral thesis. Their methods hold to current practices in the sciences, but are often innovative in those laboratories whose focus is project teaching. Most of the PhD postulants in the Institute's labs are part of the Doctoral Program Architecture and Sciences of the City (EDAR), whose numbers are increasing even though few AR Section diplomées are keen on doing post-graduate research.

If we have confined comments to a few laboratories, it is only for want of space and to give readers a representative cross section. All the others not mentioned here are just as worthy of attention. Their findings are disseminated by diverse channels: articles, essays, books that do not belong to collections...

For various reasons, this type of production is less visible than that of the labs mentioned. One is that few trade papers specializing in architecture have a reading committee or do blind reviews, or any of the other checks that have long been current in the sciences; another is that books in general carry far less weight than articles published by journals that have a world-wide reputation.

This being said, books, articles, essays and other outcomes of solitary research have left their mark on the history of architecture, and it would be arrogant to say that our discipline develops solely along lines laid down by internationally acclaimed scientific research. The richness of our Institute is reflected by the diversity of studies that it carries out, and by the many forms the results of research may assume.

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