

## From Pedagogy to Didactics: Clarifying the Discussion on Architectural Education

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### Introduction

A necessary presupposition for addressing issues on architectural education is the clarification of basic concepts used in its debate. I claim that the indiscriminate use of terms such as pedagogy, education, didactics, constitutes a serious source of confusion. In this article I argue for the need to shift focus from pedagogy to the didactics of architecture, in order to balance the pedagogy-dominated explanations in architectural education. While pedagogy addresses issues about aspirations, ideals and goals (what *should be*) of architectural education, didactics may be seen as an attempt to elaborate ways of achieving the goals, aspirations, etc. In this respect, we must distinguish between the normative character of pedagogical theories from the descriptive or scientific grounding (what *is*) of didactics. This distinction raises the question about the extent to which, educational tools such as the studio project and the live project fall under the domain of pedagogy or didactics of architecture.

### Architectural Education: the context

“...the technicians as the last edition of the white missionary, industrialisation as the last gospel of a dying race, living standards as a substitute for meaning of life...”<sup>i</sup>

For more than two decades, global capitalism, intensified consumerism and atomization have constituted for education a contemporary environment, which underwent processes of transformation in scales difficult to perceive. Education has increasingly received pressure to respond primarily to economic considerations. Along this process it appears to have abolished ideals such as the comprehensive character. The era is characterized by the high specialization and fragmentation of knowledge, by the absence of big narratives, and by the

consequent focus on microanalyses of the ephemeral.

Architectural education is not unaffected by these conditions: the meaning of architecture as *techne*, cultural discourse, ethical praxis or social agency became debatable. In the course of these years public reflection and relevant discourse have been developed about architectural education, thanks to a collective awareness and communication between the educational institutions. Meanwhile, imperative calls for change have emerged from all quarters of the field: professional institutions, other organisations and educational institutions, but mainly architectural educators' self-reflections and dialogue with colleagues are nurturing this discourse. Often, the request for an intangible “change” refers to a (re)connection of the teaching and learning process of architecture with a wider meaningfulness. Especially during the current economic crisis that deepens the division between public and private, architectural education, its meaning and role, its relevant pedagogies and ultimately its didactics, remain in scrutiny:

*Is it about developing the student's individual expressiveness, or is it a process of coming to terms with society, and even, developing a “world” citizenry? Is it a process of unifying the fragmented areas of knowledge and interpretations of reality into an articulated and meaningful whole or is it about instrumental acquiring of professional mastery?*

The issue now becomes the way we could situate, in the context of such broad questions, the enquiry on effective, consistent teaching and learning architecture. Currently, the debate seems to be primarily preoccupied by questions of pedagogical order, and rarely by questions that address directly the didactics of architecture.

Examples of questions of a didactical order in architectural education could be the following:

*Is there a need for a concrete subject-matter, based on which, the educator will teach the studio? What could be the educator's choice between improvisations and structured teaching (the liberal or interventionist role of the design instructor)? Opting for impulsive or meta-cognitive learning of architectural design? What is the meaning and the nature of freedom in the teaching of the creative process in architecture?*

### Distinguishing *didactics* from pedagogy

There are cases of discussions about architectural education, in which questions, answers and arguments are all entangled because they originate indiscriminately from the areas of pedagogy and didactics.

To offer an example of this problem, I draw from the emblematic Oxford Union debate of 2008<sup>ii</sup>. The motion of the debate echoed an essential question, which pertaining to the level of didactics remains unanswered. The question was about where (implying *how*) would architecture be better taught and learnt<sup>iii</sup> – either in the schools of architecture or in the architectural offices. The discussion highlighted sound arguments evincing that the end of ideological debates about the goals and character of education has not come yet. We thus were able to follow a meaningful repost<sup>iv</sup> to develop against the dominant discourse that identifies knowledge with information in education, and society with economy. However, the arguments – either against or for the motion – consisted of judgments at the level of pedagogy even when they addressed questions of didactics, and vice versa. For instance, the type of architect that society needs is a subject of philosophy of education, hence pertains to architectural pedagogy. Hence, it did not answer the question of didactics. Overall, the treatment of the matters in such terms would result in polarization rather than in conclusiveness of the discussion.

For these reasons, I claim that it is necessary to make a fundamental distinction between pedagogy and didactics, to help maintain consistency into the developing questions and arguments. The self-reflections and dialogue with colleagues, that the educators of architecture are developing, constitute a theoretical form of didactics, yet one that is not of a scientific form. On the other hand, predominant methodological approaches to teaching are empirical, based on previous experience and they do not seem to take into account recent knowledge, i.e. knowledge viewing learning as a cognitive process<sup>v</sup>. Is it feasible for architecture to have its special didactics as a theoretically articulate scientific subject? A necessary step to this end is the development of a descriptive didactics.

In this paper, in expressions such as “didactics of architecture”, “didactic tools in architectural education” etc., the term *didactics* (*didactic*) has substituted the term *pedagogy* as a result of a conceptual distinction. Moreover, despite the awareness about the negative connotations that the word *didactics* has in English (implying the formalist educationalist practices that combine dogma with dullness), I argue for the necessity of the choice.

*Didactics* is one of the two major currents of reflection on education -the other being *pedagogy*. They refer to the same reality, in that they constitute ways of investigating the educational phenomenon. Each one is a distinct field of educational research, and the degree of distinction differs across countries and educational traditions. Across continental Europe, educational theorizing historically has preserved a distinct meaning for *didactics*, from that of *pedagogy*. On the other hand, in the Anglo-American world *didactics* remained a marginalised – if not an invisible – conception within educational discourse. In an article with the eloquent title “The pedagogic paradox – or: why no didactics in England?” D. Hamilton<sup>vi</sup> traces the historical conditions of this rejection in the 19<sup>th</sup> century English schooling. The political goals of English schooling then, were incompatible with notions of mental growth, understanding, self-realisation and social change. Hence, the idea of a science of teaching (and learning), often deriving in Europe from Herbart<sup>vii</sup>, although circulated in Anglo-American educational discussions towards the end of nineteenth century, was deemed as superfluous to English understandings of education and schooling<sup>viii</sup>. Amid efforts to maintain the status quo of predetermined and immoveable order of things, appropriate educational systems developed specifically to social classes, as self-contained and segmented. This contradicted the development of an all-embracing, grand theory of education related to teaching:

For over 100 years, nineteenth and twentieth century ideologies of human difference, predetermined mental capacity, and social containment, precluded the creation and dissemination of a developmental science of teaching.<sup>ix</sup>

Renewed scientific approaches to the practice of teaching, during the 1980's, revitalised educational theorizing in the English-speaking world, as they drew from the works of Vygotsky, Luria and Bruner. Didactics, however, remained

a marginalised field, at best overlapping with pedagogy, although part of its subjects was treated by the developing field of *learning theories*. Characteristic example<sup>x</sup> is the 10-volume Oxford English Dictionary of the 1970's, which included the "art or science of teaching" among its definitions for pedagogy, and the almost identical "science or art of teaching" for didactics. From another point of view, in the English-speaking world of the same period, pedagogy developed a close association with historical, social and cultural analysis. Additionally, the wide recognition of two seminal interventions of the 1970's by Anglo-American scholars – the first being Paulo Freire's "*Pedagogy of the Oppressed*" (1971) and the second being Basil Bernstein's "*On the classification and framing of educational knowledge*" (1971) – is considered a turning point in the hegemonic establishment of pedagogy as a discipline<sup>xi</sup>.

Architectural education could not remain unaffected by the lack of enquiry at the level of didactics. It is indicative that in the relevant discourse terminology involves only derivatives of *pedagogy*, as i.e. architectural *pedagogies*, knowledge-based architectural *pedagogy*, architectural studio *pedagogy*, teaching architecture–practising *pedagogy*, etc., where the word *pedagogy* covers the concept of *didactics*.

I argue that an enquiry of architectural education, deprived of the concept of *didactics*, cannot be successfully conclusive. Conversely, by reintroducing *didactics* into the enquiry on architectural education, the analytical perspectives already provided by pedagogy are extended. Questions of a new order will fertilize the discussion. Perhaps, it would not be an exaggeration to suggest that by reintroducing *didactics* in the vocabulary of the discourse about architectural education the limits of its world will be broadened<sup>xii</sup>.

### A complicate relationship

In the next I attempt a clarification of conceptions about *didactics* and *pedagogy*, as they developed in the continental European educational discourse, by providing definitions. Both didactics and pedagogy are the two major currents of reflection on education. Although both fields operate in the same territory and use

common epistemological tools, each one is a distinct field of educational research<sup>xiii</sup>.

*Didactics* is established as the name of a practical activity (the art of teaching along with a practical knowledge *in* teaching), yet at the same time it is a theoretical knowledge (scientific and non-scientific) about teaching, learning, and their conditions. Thus, the discipline of *didactics* unfolds in three main regions<sup>xiv</sup>: what-region (concerned with the content of teaching), how-region (concerned with the method of teaching) and why-region (justifications of curricular choices).

*Didactics* focuses on the individual (the learner) and its cognitive characteristics and functioning, when she/he learns a given content and becomes a knowing subject. It takes a perspective of educational reality that is drawing extensively from cognitive psychology and further from theory of teaching, although some researchers draw from social psychology<sup>xv</sup>. It has its background in philosophy (emblematic text is the *Didactica Magna* by Johan Amos Comenius, 1657). The intent of didactics is to modify teaching practices and to promote their development, in order to provide the foundations for change in education<sup>xvi</sup>. As a research field it investigates adequate forms of instruction (that is how best can a content be taught and learned, in what settings and by what means). By these features didactics differentiates itself – even socially – from pedagogy<sup>xvii</sup>.

*Pedagogy* (*pédagogie*) on the other hand refers to theoretical and organisational underpinning of education – to educational goals rather than programmes and methods. It is interested in the learner's becoming a social subject, in its future role in society. It has its reference to philosophy of education, to educational sociology and further to theory of education. Pedagogy maintains its bases on the political sciences. From the point of view of the French didacticians, pedagogy is more general than didactics<sup>xviii</sup>. It is through the educational goals-setting that it connects with philosophy of education.

The relation of the two disciplines is often complicated, contradicting and confusing. As an example, although it is rare to find a specific form of didactics that relates to social problem solving and socially-based approaches<sup>xix</sup>, didactics is always connected to a context in

society by the link of curriculum. Curriculum sets the limits, within which didactics operates. The limits are the aims and goals of education at the certain moment, within the certain context. In effect, it is through curriculum that didactics could be perceived no less political than pedagogy. From this point of view, didactics cannot be reduced to a neutral instrument or to a set of teaching methods<sup>xx</sup>. Since its reinvention as a human science (in distinction to the natural sciences) by German educationalists in the early 20<sup>th</sup> c., *didactics* associated with an expanded conception of instruction. Along with the “what?” and “how?” questions, the why-region of questioning, via historical, cultural and social deliberations, is the link with pedagogy. Besides, in extension to the “why?” came the “what should they become?” question, which marks a territory of intersection between didactics and pedagogy. Otherwise stated, didactics is in diachronic relation with the educational situation, while pedagogy is in synchronic relation to it<sup>xxi</sup>.

### The relevance to architectural education

Architectural education, like any educational practice, implies a theory. The implied theory is always value-laden: it embodies intentions and interests tied to historical, cultural, and socio-political contingencies<sup>xxii</sup>. Its programs, like any other educational design, are predicated upon value assumptions, and ultimately choices, about the nature of human beings (their interests, aspirations and needs as well as their vision of what constitutes a good life), the value of specific forms of content (that is what knowledge and skills are most worthwhile), and learning opportunities for students (inclusion, equity pedagogy, teachers’ knowledge of their students, etc.) – all of what constitute normative theories that we call *pedagogies*.

Pedagogy, as theory of normative character, prescribes what *should* or *ought* to be done in education and by means of education. On the grounds of its normative character, pedagogy sets goals. That is, by making assumptions it expresses intentions and *desires* about how a human, society, architecture, etc. should be or become. On the other hand, didactics consists of factual propositions about how a goal can be achieved. Drawing from science, didactics is not preoccupied with how human nature *should* be, but instead it contends with understanding and describing it. It deals with discovery of knowledge, hence, with true beliefs and with

observable and (sometimes) measurable characteristics of human nature.

Therefore, it would be fair to assume that while didactics addresses facts (what *is*) and reason, pedagogy addresses attitudes (what *should be*), and even desire. Attitudes and desire are motivating forces to human action. Desire needs the guidance of reason for its success and for its justification. Besides, we tend to perceive reason as instrumental: there is no content for reason without desire. At this point a plausible question can be raised: is there a logical relation between the normative and the descriptive part of educational theorizing? Does a descriptive theory (i.e. a scientific learning theory) deduce a normative theory – or vice-versa? And further: could a normative element reside in didactics?

Since David Hume, who pointed to the “is–ought” logical gap<sup>xxiii</sup>, there is a strong current of thought asserting that no logical bridge connects “is” with “ought”: we can’t deduce an “ought” from an “is”.

Why would this problem be relevant to architectural education? I think that it might prove practically useful to know whether long-established teaching traditions, practices, subject matter etc. in architecture, are to date functioning either irrespective of or directly associated with specific normative theories (pedagogies) about i.e. what kind of architects are necessary to our society, what is essential to know, etc. To put the question differently: *can a didactics of architecture develop specifically to a concrete pedagogy and vice versa?* If not, this means that didactics is simply instrumental and can even have a universal use regardless of the various pedagogies, i.e. whether emancipative, authoritative, etc. If yes, then there must be a connection of didactics with normative characteristics. Further questions can develop. For instance: Can two antithetic pedagogies, (i.e. a student-centered and a teacher-centered) use the same didactic tools to achieve their (opposing) educational goals? Or, does each one of the pedagogies need a different didactics, specific to its aspirations, in order to attain its goals? Can different didactic tools of architectural education, (i.e. the studio project and the live project) equally serve opposite educational theories (pedagogies)?

### The contribution of a Didactics specific to architecture

Despite the difficulties arising from the “is–ought problem” theory, educationalists (one of the first being J. Dewey, in early 20<sup>th</sup> c.) have brought forth a description of a relationship that appears to suggest quite the opposite – what could be seen as a reconciliation of the problematic duality of normative and descriptive educational theorizing. The relationship is portrayed in the Learning Cycle<sup>xxiv</sup>. The cycle represents a process that roughly involves three steps. Firstly, instructors gain understanding of what happens with the practice of teaching and learning in their educational setting (i.e. studio) and form descriptive judgments about matters of fact (*about how things happen, about students’ requirements, about local conditions, interactions, etc.*). Then, they reflect on their understanding and proceed to make evaluative judgments (*is this a good practice and why?*). Finally they transform the new knowledge produced by evaluations, through practical reasoning, to prescriptive propositions (*which direction of teaching, what content, method, etc. should result into new planning*)<sup>xxv</sup>. This area of the cycle constitutes the normative arc. The cycle clearly illustrates a process of deduction of normative theories (“ought”) from descriptive and analytical approaches (“is”).

It is known among educationalists that instructors are facing the challenge to bridge the experience of “is” of their teaching practice with the “ought” of formal normative theories. The challenge motivates a reflective stance, which may further develop into a private theory that serves to fill the gap between the two.

After all, the question on whether architectural pedagogies and didactics are logically associated can be narrowed to: *which pedagogies (normative theories) can be deduced from didactic praxis (via a theory with descriptive content)?* To respond to this apparent conflict<sup>xxvi</sup>, it might prove useful if we distinguished between two categories of normative approaches: the ones that are deducible from facts (*is*) and the others that are not. But, what normative theories belong to each category, and why is it useful to know? It is generally perceived that normative theories of ideological, political, or ethical character (i.e. progressive, emancipative, authoritative etc.) cannot be deduced from factual judgments (descriptions of facts).

If architecture had developed its (descriptive) didactics, then we would be able to distinguish among pedagogies, those logically implied from didactics, and the “arbitrary”. Descriptive didactics can inform us on whether a specific pedagogy has become integral part of the learning process. In this way, it is possible to reconsider and reposition pedagogies across this dividing line, hence, modifying an initial categorization (always by means of descriptive didactics). For instance, a *Critical Pedagogy* for architecture, as a theory that draws from political philosophy, initially would be considered as the kind of normative theory that cannot be imposed by the natural situation (the teaching and learning of architecture within a specific setting). Hence, it would be deemed as unrelated to the “is”, as unverifiable and arbitrary – apparently satisfying the Humean equation. However, it involves a factual body of key ideas (power-knowledge relations, deep-meaning understanding, social context, etc.) susceptible to verifiability. Analysis by descriptive didactics could reveal a sound interrelation between the principles of *Critical pedagogy*, and the facts of the learning process (i.e. with regards to key concepts of unlearning, learning, relearning, etc.). Then, we would alter our initial judgment and would view hereinafter this pedagogy as instrumentally related to architecture’s didactics (as determinant of the modes and the effects of teaching, and the mechanisms of learning). In that case, it would be fair to assume that it is the specific nature of Critical Pedagogy, as normative theory, that affects learning and teaching in architecture in a special way.

Conversely, we often notice, either in literature or in the discussions, that educational tools (i.e. the studio project, the live project) are discussed in terms of pedagogy. However, both of the examples are didactic tools rather than pedagogical tools: they are methods to increase the efficiency of learning and teaching. In the process of achieving the educational goals, didactic tools are the media. As such, they are justifiable by rational means: either psychology of learning, cognitive theories, and even neuroscience of learning, or rational investigation. This is because, what is effective and what is not, is object of an empirical and theoretical investigation, and not of a normative approach.

## Conclusion

This article was written for the purpose of helping distinguish between the normative character of architectural pedagogies from the descriptive foundation of architecture's didactics, in an effort to clarify the two distinct fields of didactics and pedagogy. It argued that a shift of focus from pedagogy to the didactics of architecture would broaden understandings about architectural education. More specifically, it suggested that the development of architecture's descriptive didactics can provide valid judgments about, which pedagogical theory is affecting learning in architecture, and which is unrelated to learning. Hence, the exploration of the "is-ought" logical gap of architectural education would help render its discussions more effective.

## Notes

<sup>i</sup> This is a comment on the condition of an era in transition, comparable to the condition of (architectural) education of the last thirty years. In the novel "Homo Faber" [my translation]. Frisch, Max. *Homo Faber, Ein Bericht*: Suhr Kamp, 1956

<sup>ii</sup> The debate was attended by the author. The Oxford Union Debate "Architecture would be better off without Schools of Architecture" took place on Monday 21 July 2008, 20:00-22:00.

<sup>iii</sup> The discussion about "where" has clearly a cognitive dimension: the topic of situatedness has extensively preoccupied cognitive science, particularly since the 80's. Moreover, L. Vygotsky had already since 1920's introduced the idea that a knowing subject's behavior and cognition are result also of a close relationship between the subject and its environment.

<sup>iv</sup> Articulated by Sir Peter Cook and Jeremy Till, who argued against the motion.

<sup>v</sup> There is a gap between didactic theory on architectural design and well-built links into the cognitive science approach of design (Eastman, McCracken, Newstetter, 2001).

<sup>vi</sup> Hamilton, D. (1999). The Pedagogic Paradox (or why no Didactics in England?) *Pedagogy, Culture & Society* 7: 1, p.135-151

<sup>vii</sup> German philosopher Johann Friedrich Herbart had the aspiration to devise an education system from the first principles. He worked on a general theory of education (Allgemeine pädagogik, English transl. 1892). He occupied Kant's chair of philosophy in Königsberg university from 1809 to 1835. He also wrote his Lectures which included a set of formal steps for instruction. His ideas about the organisation of instruction and lesson planning were intimately bound to his philosophical ideas.

<sup>viii</sup> Hamilton supports this explanation by also underlining the marginal position within the English world that gained from the outset visions of, i.e. Alexander Bain (*Education as*

*a Science*, 1879), or Herbart (*The Science of Education*, English version, 1892).

<sup>ix</sup> Hamilton, op. cit. p. 137

<sup>x</sup> Hamilton, op. cit. p. 137

<sup>xi</sup> Hamilton, op. cit. p. 146

<sup>xii</sup> "...the limits of my language mean the limits of my world." Wittgenstein, Ludvig. *Tractatus Logico Philosophicus*. London, New York: Kegan Paul, Trench, Trubner & Co., LTD., 1922, proposition 5.6

<sup>xiii</sup> Bertrand, Y. & Houssaye J. (1999). Pédagogie and didactique: An incestuous relationship. *Journal of Instructional Science*, 27(1-2), 33-51.

<sup>xiv</sup> Bengtsson, J. (1997). Didactical dimensions. Possibilities and limits of an integrated didactics. *Journal of Swedish Educational Research*, 2(4), 241-262.

<sup>xv</sup> Bertrand & Houssaye, op. cit. p. 40

<sup>xx</sup> Hamilton, op. cit. p. 136

<sup>xxi</sup> Tochon, F.V. & Munby, H. (1993). Novice and expert teachers' time epistemology: A wave function from didactics to pedagogy. *Teacher & Teacher Education* 9, 205-218.

<sup>xxii</sup> Giroux, H. (Ed.). (1983). *The Hidden curriculum and moral education: deception or discovery?* Berkeley, California: McCutchan Pub. Corp.

<sup>xxiii</sup> Hume, D. A Treatise of Human Nature Book III Part I Section I.

<sup>xxiv</sup> Imsen, G. (1999). Reflection as a bridging concept between normative and descriptive approaches to didactics. *TN TEE Publications* 2:1, p.98, <http://tntee.umu.se/publications/v2n1/pdf/ch7.pdf> [07.03.2013].

<sup>xxv</sup> Donald Schön has extensively described such processes demonstrating reflection as a key-concept. In Schön, D. (1995). *The reflective practitioner: how professionals think in action*. Aldershot England : Arena.

<sup>xxvi</sup> Between the Humean approach of the is-ought problem and the educationalists' perspective as portrayed in the Learning Cycle.

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