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BEYOND THE DISCUSSION AT THE EXTREMES
An Investigation into the Plausibility of Shifting Focus from Pedagogy to a Didactics of Architecture

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THESIS

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Abstract

Architectural education has received attention from within and even from outside the field, and it has even been presented as a model for all professional education, as i.e. by Donald Schön, since 1983 and 1985.

In conditions of globalized capitalism, developing tendencies in education, such as the shift from objectivist to constructivist paradigms, have not left architectural education unaffected. Especially since the global financial crisis of 2008 it is expected to remain under scrutiny: Does contemporary architectural education have the purpose of 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 acquiring instrumental knowledge towards professional mastery?

The motivation for this thesis was born in the aporia of how we could situate, in the context of broad questions as the above, the enquiry into ways of investigating better teaching and learning in architecture.

This research draws from examples of architectural education in the U.K. and from previous research work undertaken in the U.K., as well as from relevant deliberations from the international educational scene. The thesis distinguishes between pedagogy and didactics within the current discourse, and argues for the priority of didactics in the framing of explanations for architectural education. The main questions are: (a) what are ways to investigate better modes of learning in architecture, and (b) what are presuppositions for establishing a special didactics for architecture.

Two methods of enquiry are employed in this thesis. One is argumentative analysis, used on two exemplary cases of a subcategory of the broader discussion, described in this thesis as ‘discussion at the extremes’. The other is philosophical explanation, used to investigate the logical, theoretical and philosophical presuppositions and consequences of architectural education. The ‘Theory of Experience in Education’ by John Dewey and the ‘Theory of Skill Acquisition’ by Hubert Dreyfus, representing the distinct theoretical frames of pragmatism and phenomenology respectively, are proposed for the study of architecture’s two didactic tools, of the Design Studio project and the Live project. The approach is dialogic, attempting to bridge qualities of the two frames into a hybrid descriptive model. The thesis concludes with the proposed component of a descriptive didactics for architecture.

At the end, this thesis puts forward the opening of a broader discussion about the prospects for a didactics and meta-didactics of architecture.
Lay Summary

Architectural education has since long received attention both from within and from outside the field; it has even been presented as a model for all professional education.

Developing tendencies in education overall have not left architectural education unaffected. Especially in conditions of the recent economic crisis of 2008 it is expected to 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 articulate and meaningful whole or is it about acquiring instrumental knowledge towards professional mastery?

Such broad questions that inhabit recent discussions on architectural education pertain to the level of educational goal setting (pedagogy) and are not easily translated in concrete ideas for advancing modes of teaching and learning in architecture (didactics).

The thesis argues for the priority of didactics in an effort to overcome the rather un-theorized condition of architectural education. To this end, the thesis (re)constructs a discussion, from which essential questions emerge, to help clarify the landscape of the current enquiry. Further, it proposes the use of two distinct theoretical frameworks (pragmatism and phenomenology) for the study of architecture’s two didactic tools, of the Design Studio and the Live project – hence, proposing a component of descriptive didactics.

This research draws from U.K. examples of architectural education and from previous research work undertaken in the U.K., as well as from relevant deliberations from the international educational scene.

The thesis concludes with the opening of a broader discussion about the perspectives for the didactics and meta-didactics of architecture.
By signing this declaration I certify that:

- This thesis was composed only by myself.
- The thesis comprises only my original work towards the degree of PhD, except when clearly indicated differently in the case of co-authored publications.
- This work has not been submitted for any other degree or professional qualification except as specified.

The author

Stavros Melissinopoulos
## TABLE of CONTENTS

### Introduction ........................................................................................................................................................................ 1

1. An introduction to the thesis ................................................................................................................................. 2

2. Introduction to this research ............................................................................................................................. 7

3. Enquiry into architectural education as educational research ................................................................. 10

4. A review of the most popular research approaches adopted by scholars of architectural education. ........................................................................................................................................................................ 14

5. Educational research and methodological approaches ................................................................................. 20

6. The research approach of this thesis ................................................................................................................... 28

   6.1 The research approach of the initial stage ......................................................................................................... 30

   6.1.1 Data collection ............................................................................................................................................... 32

   6.1.2 Research approach ........................................................................................................................................ 33

   6.1.3 Sources of data ............................................................................................................................................. 34

   6.1.4 The research methods ................................................................................................................................ 36

   6.2 The research approach of the final stage ....................................................................................................... 36

   6.2.1 The methodology ......................................................................................................................................... 39

### Chapter 1 ...................................................................................................................................................................... 43

The Discussion at the Extremes as meta-discussion

1.1 Extremes and rationality ........................................................................................................................................ 44

1.2 Questions of the unanswerable kind ............................................................................................................... 47

1.3 Case study I: Do we need schools of architecture? ..................................................................................... 49

   1.3.1 The Oxford Union debate – Codification of the arguments ........................................................................ 61

   1.3.1.1 Proposition Arguments .......................................................................................................................... 62

   1.3.1.2 Opposition Arguments ........................................................................................................................ 67

1.4 Case study II: A teaching hospital for architecture .................................................................................. 72

   1.4.1 Case study II: The context ......................................................................................................................... 72

   1.4.2 Case study II: The proposal ..................................................................................................................... 76

### Chapter 2 ...................................................................................................................................................................... 81

Architectural Education: the current context and a Historic Background

2.1 Introduction ............................................................................................................................................................. 82

2.2 Architectural Education: the context ............................................................................................................. 82

2.3 A brief history of Architectural Education (primarily) in Britain .......................................................... 88

   2.3.1 The Medieval Era, the Guild System and the Unity of Spheres ............................................................. 90

   2.3.2 Renaissance, or the Early Modern period ................................................................................................. 93

   2.3.3 The Enlightenment ..................................................................................................................................... 94

   2.3.4 Post-Enlightenment ................................................................................................................................. 95

   2.3.5 The Official System ..................................................................................................................................... 101

   2.3.6 After the Official System ........................................................................................................................ 103

2.4 A History of the Discourse on Architectural Education in Britain .......................................................... 107

2.5 A history of Architectural Didactics ............................................................................................................ 110

### Chapter 3 ...................................................................................................................................................................... 115

Re-orienting the discussion: from Pedagogy to Didactics .................................................................................. 115

3.1 Introduction ......................................................................................................................................................... 116

3.2 Distinguishing *didactics* from pedagogy ...................................................................................................... 118

3.3 A complicated relationship ............................................................................................................................ 121

3.4 Didactic tools for architectural education .................................................................................................... 124

3.5 The relevance to architectural education ....................................................................................................... 125

3.6 The potential contribution of a Didactics specific to architecture ............................................................... 130
## Chapter 4

**Reframing the discussion at the extremes**

4.1 Reframing the discussion at the extremes .................................................. 140
4.2 Paulo Freire: the relevance of Theory of Education for Liberation .................. 143
4.3 Paulo Freire: biographical information .......................................................... 147
4.4 Paulo Freire: philosophy of education ............................................................ 149
4.4.1 The ‘banking’ model ..................................................................................... 150
4.4.2 The alternative of problem-posing ............................................................... 153
4.4.2.1 The teacher-student relationship ............................................................... 155
4.4.2.2 The role of the teacher .............................................................................. 156
4.4.2.3 Implications for architectural education ..................................................... 157
4.4.3 The limits of the Theory of Education for Liberation ................................... 158
4.4.4 Freire’s connection with Dewey and Dreyfus ................................................. 160

## Chapter 5

**Republic or Solitude?**

### Pragmatism and Phenomenology: on two aspects of the ‘real’

5.1 Introduction ....................................................................................................... 166
5.2 Dualities in the treatment of this thesis ............................................................. 168
5.3 The meaning of meaning in terms of Republic and Solitude ............................ 170
5.3.1 In the Design Studio ..................................................................................... 174
5.3.2 Acquiring understanding and constructing meaning in architectural education 174
5.4 Phenomenology: The Dreyfus model of skill acquisition .................................. 181
5.4.1 Stage one: the novice ................................................................................... 185
5.4.2 Stage two: the advanced beginner ............................................................... 186
5.4.3 Stage three: the competent ........................................................................... 187
5.4.5 Stage four: Proficiency .................................................................................. 192
5.4.6 Stage five: Expertise ..................................................................................... 193
5.4.7 Stage six: Mastery ....................................................................................... 195
5.4.8 Stage seven: Practical wisdom ...................................................................... 196
5.5 Discussion of the phenomenological approach ............................................... 197
5.6 The pragmatist approach: ‘experience’ in John Dewey’s theorisation .............. 205
5.6.1 The notion of experience in architectural education ..................................... 209
5.6.2 Constructivist teaching in the design studio ............................................... 215
5.7 Discussion of the pragmatist approach ............................................................ 219

## 6 Conclusion

6.1 The conditions around this research ............................................................... 225
6.2 General Conclusions ....................................................................................... 226
6.3 The contribution of the thesis to the field ....................................................... 231
6.4 Epilogue ........................................................................................................... 235

## Bibliography

................................................................................................................................. 237

## Appendices

................................................................................................................................. 251

### Appendix 1

The Oxford Union Debate – Transcript

### Appendix 2

The original text in Greek by Costis Palamas
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Introduction

...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...

[my translation]

Thesis structure
Research approaches in the field of architectural education
Educational research as an established research field
Research approach of this study – the methods and limitations of phase I and II
1. An introduction to the thesis

Architecture and education are both fields in which actions are taken and decisions made that will shape future states of affairs. Contemporary educational systems are perceived as tools with the ability to shape the future direction of societies – whether it be the material or idealistic aspects of their future – either by the perpetuating of a convenient present state or by subverting an inconvenient one. Similarly, the aim of architecture is to build for the future by acting on value assumptions and choices about the nature of human beings, their interests, aspirations, needs, as well as their vision of what constitutes a good life. Research into architectural education cannot help but work within these frameworks.

This thesis was motivated by the *aporia* of how we could situate enquiries concerning better teaching and learning in architecture in the context of broad pedagogical (or philosophical) questions that tend to preoccupy deliberations about architectural education. This research draws from examples of architectural education in the U.K. and from previous research work undertaken in the U.K., as well as from relevant deliberations from the international educational scene. The thesis analyses recent discussions and deliberations about architectural education and identifies a gap between architectural education and educational theory. It also historically traces the state of dichotomy in architectural education that continues to nurture tensions between education and practice and the contemporary discussions.

The thesis claims that before we can address issues of architectural education we need to clarify the basic concepts used in the debate surrounding it. In the current discourse on architectural education, the indiscriminate use of terms such as pedagogy, education and didactics is a serious source of confusion. Consequently, the thesis introduces a distinction between the categories of pedagogy and didactics in the theorization of architectural education, to clarify the developing discourse of both present and future enquiries.

The thesis argues that it is necessary to shift focus from the pedagogy to the didactics of architecture, in order to balance, by alternative insights and new knowledge of the practices, the pedagogy-dominated approaches. While pedagogy addresses the aspirations, ideals and goals (what *should be* the case) of architectural education, didactics may be seen as an attempt to elaborate on ways of achieving these aspirations and goals. In this respect, we must distinguish between the normative character of pedagogical theories and the descriptive or scientific grounding (what *is* the case) of didactics. Further, it argues that architectural education needs to establish a descriptive didactics, a normative didactics and a meta-didactics.
The thesis draws on educational theory and philosophy, and proposes a model of descriptive didactics as a first step for its theoretical articulation. Finally, it proposes additional areas of enquiry which, if explored, will further develop architectural education. The central issues to be addressed are: (a) ways to identify better modes of learning in architecture, and (b) prerequisites for establishing a particular didactics for architecture.

A combination of two methods of enquiry is employed in this thesis: one is argumentative analysis and the other is philosophical explanation. The first method is used on two exemplary cases from a subcategory of the broader discussion, described in this thesis as ‘discussion at the extremes’. The second method is used to investigate the logical, theoretical and philosophical presuppositions and consequences of architectural education. Two distinct theoretical frames – pragmatism and phenomenology – are then employed for the study of two of architectural education’s antagonistic (or symbiotic) didactic tools, namely the Design Studio project and the Live project, as a springboard, to propose a component of descriptive didactics. The approach is dialogic, attempting to bridge the two theoretical frameworks.

The thesis develops in five chapters as follows:

In Chapter 1, the focus of enquiry is on discussions about architectural education which present unusual, paradoxical, or ‘extreme’ arguments and positions, and which this thesis sees as constituting instances of discussion at the extremes, from which it claims to extract questions ‘worth asking’. These fundamental questions ought to clarify the landscape of inquiry and further stimulate a productive reflection rather than lead to anticipated definite answers. To this end, this chapter uses two cases of public discussion about architectural education as representative examples of discussion at the extremes: the Oxford Union Debate of 2008 and the proposal of Alex Tzonis for establishing architecture’s ‘teaching hospital’ in the Beijing International Conference on Architectural Education of 2007. Issues that have preoccupied architectural education, such as concerns about ‘reality’ and the ‘real’, the role of the teacher and the teacher-student relationship, different modes of learning, and the purpose and role of (higher) architectural education, are central to these discussions.

In this chapter a dialogic approach is employed to analyse, discuss and amplify the arguments of each case in an attempt to identify and develop questions which express the dilemma of whether the learner of architecture performs better when relying on the inner creative self or in communion with others. The chapter reveals that the deliberations are initially a-theoretical in character, lacking grounding in or connection with broader educational theories. Subsequently, the chapter paves the way for the main position that this thesis will subsequently develop, which is asserting a distinction between didactics and
pedagogy. The thesis claims that an exhaustive discussion of the above questions, via their connection with broader educational theory, is ultimately a prerequisite for enquiries into the field of architectural didactics.

Chapter 2 presents a historical and contextualised account of architectural education, primarily in the UK. From the medieval era, through the Renaissance and the Enlightenment, to the British version of the Beaux-Arts and the more recent Official System\(^1\), architectural education has developed characteristics that manifest as tensions between practice and academy. Typical binary oppositions, from architecture-as-art and architecture-as-science paradigms, or ‘architecture-as-art-value’ and ‘architecture-as-exchange-value’, to learning architecture in schools or out in professional practice, owe their present existence to such inherited characteristics. The same is the case for the a-theoretical nature of architectural education that this thesis intends to remedy.

Chapter 3 supports and develops the main argument of the thesis, concerning the need to shift focus from pedagogy to the didactics of architecture, in order to balance pedagogy-dominated discussions and explanations. The chapter claims that the indiscriminate use of terms such as pedagogy, education, and didactics is a serious source of confusion. It first clarifies these basic concepts as they are used in the current debate. On the one hand, pedagogy concerns evaluative and normative theories in that it prescribes what \textit{should} or \textit{ought} to be done in education and by means of education. It sets goals and, by making assumptions, expresses intentions and \textit{desires} about how society, architecture, etc. should be or become. Didactics, on the other hand, consists of factual propositions about how a goal can be achieved. Drawing from science, didactics is not preoccupied with how human nature \textit{should} be but instead it seeks to understand and describe it. It deals with discovery of knowledge and thus with true beliefs and the observable or (usually) measurable characteristics of human nature. The chapter then discusses the possibility of a logical relation between the normative and the descriptive part of theorizing architectural education. Furthermore, it discusses whether a descriptive theory (i.e. a scientific learning theory) can be deduced from normative theory – or vice-versa. In doing so, the chapter revisits David Hume’s ‘is–ought’ gap to explore the prospects of a logical bridging between ‘is’ and ‘ought’. The ‘is–ought’ question becomes especially relevant as the chapter extends the original argument to claim that architecture is in need of its own specific didactics. Could a

\(^{1}\) It is the professional paradigm that meant to meet the post-WWII needs of regeneration in Britain. It represented the shift of architectural work from the private professional practice to a public sector of salaried service. Its reflection in education resulted in the alignment with a scientific and positivistic approach to design with focus on technological and sociological aspects of architecture.
didactics of architecture develop that is specifically connected to a concrete pedagogy (and vice versa)? This would help us to address the overarching question of this thesis: ‘How might the broad philosophical and political questions about architectural education, which inhabit its public discussions and reflections, be accommodated in terms of architecture’s didactics?’

Chapter 4 is based on the premise, established in chapters 1, 2 and 3, of the a-theoretical character of architectural education as a practice. Moreover, it asserts that the discussions and deliberations about architectural education not only employ arguments that indiscriminately address different categories (pedagogy and didactics), but result in inconclusive answers, and also fail to be grounded in or connected with broader educational theories. Issues that have preoccupied architectural education - such as concerns about ‘reality’ and the ‘real’, the role of the teacher and the teacher-student relationship, different modes of learning, and the purpose and role of (higher) architectural education - have already been examined in significant texts by philosophers and scholars of education. Even the discussion at the extremes, which asks whether architecture should be taught in or out of schools, is echoed in these texts. In this chapter therefore I select Pedagogy of the Oppressed to provide an exposition and analysis of the Theory of Education for Liberation, and introduce Paulo Freire, first of a triad of philosophers - along with John Dewey and Hubert Dreyfus – that inform the arguments and the proposition of this thesis.

The theory of Education for Liberation is a paradigmatic case of educational philosophy (pedagogy) that is connected to a theoretically articulate set of didactics, consisting of descriptive didactics, normative didactics and meta-didactics. The theory achieves this primarily by its particular focus on learners and its learners’ mentality, based on detailed and insightful observations made by Freire. The theory offers a response to the questions that this thesis developed in chapter 3, regarding the possibility of logical associations between pedagogies (normative theories) and didactic practices in architectural education.

The chapter explains how Freire, by linking the categories of history, politics, economics and class to the concepts of culture and power, conceived and implemented didactic tools, such as ‘critical pedagogy’, ‘problem-posing’, ‘play’ and ‘aesthetic sensibility’, that are consistent with the theory’s own claims. The thesis does not intend to apply or test the theoretical principles of Freire’s theory onto this enquiry of architectural education. However, this chapter suggests that, through the theory’s fundamental concepts of commitment and lived experience, Freire parallels Dreyfus’ phenomenological and Dewey’s
pragmatist approaches as they are presented in chapter 5, doing the service of providing an indication that means and ends can be brought together.

Chapter 5 examines the implications of the discussion at the extremes for the plausibility of a descriptive didactics specific to architecture. It reconstructs the fundamental question of ‘learning architecture in or out of schools’, as it emerged from the two paradigmatic cases of the Oxford Conference and Architecture’s teaching hospital, into a question about the primacy of either the socio-cultural contexts or the inner creative self over learning and teaching in architecture. This is rhetorically articulated in the thesis as ‘in Republic or in Solitude’.

The first part of the chapter demonstrates that the question ‘in Republic or in Solitude’ underlies a discussion about meaning-making and meaning-creation in the learning of architecture. A version of descriptive didactics specific to architecture is proposed, consistent with educational theory (pedagogy). The thesis does not adhere to a single theoretical paradigm, and thus avoids engaging with only one perspective on teaching and learning phenomena. It proposes a hybrid model to address both the implicit, intuitive and the explicit, rational domains of knowledge. To this end, the chapter draws from two theoretical frameworks – pragmatism and phenomenology. The hybrid model brings together the qualities from the two paradigms and hence offers an alternative critical reading of two of architecture’s didactic tools, the Design Studio project and the Live project.

The model of didactics proposed by this thesis firstly relies upon the Dreyfus phenomenological theory of skill acquisition, as it relates to architecture. It analyses the learning process from a first-person perspective to provide deeper insights, in contrast to the partial and sometimes more shallow treatments that come from a third-person (objectivist, traditional) perspective. The model focuses on implicit knowledge and investigates intuition as the area of ‘how-to’ knowledge, which is difficult to define and to communicate. It addresses the type of learning that is based on lived experience and is rooted in action, and hence is largely personal in nature and context-dependant. Learners’ commitment and involvement are essential to this perspective. Detachment and metacognition are seen to inhibit knowledge.

Secondly, the proposed model draws on John Dewey’s pragmatist Theory of Experience. It also by implication draws directly from educational constructivism and other relevant contemporary theorisations, such as ‘Situated Learning’, the ‘Zone of Proximal Development’ and the ‘Theory of Scaffolding’. This means that the proposed model views learning as the continuous reconstruction of a student’s experience, by acknowledging each student’s individual understandings as they shape ‘a world of our [their] own making’.

6
This thesis does not produce descriptive hard data about the two didactic tools – instead, draws from appropriate existing research work. Basic sources of such data include the following: (i) texts about the Design studio in architectural education by Donald Schön, (ii) the PhD dissertation ‘Concept creation in the design studio’ by Nelly Marda, (iii) the PhD dissertation ‘Between studio and street: the role of live project in architectural education’ by Rachel Sara and (iv) the PhD dissertation ‘A critique of the live project’ by James Benedict Brown. In conclusion, this chapter proposes a model of didactics for architectural education which acknowledges the complex interplay between learning in Republic and learning in Solitude. It further suggests that learning takes place in both conditions as students constantly reiterate between experiencing the surrounding world with its established meanings and renegotiating inherent structures in order to make sense of the world.

As an epilogue, this thesis intends to further open discussion about the Didactics of architecture. It concludes with suggestions for further investigation into the possibility of architecture’s normative, descriptive and meta-didactics. It suggests that the proposed development of architecture’s descriptive didactics can provide valid judgments about how pedagogical theory affects learning in architecture. Moreover, this thesis facilitates the emergence of fundamental questions about architectural education, which served to drive the present research, but can also serve as a basis for further research topics on architectural didactics. One such example would be further research on the norms and values of teaching architecture, which determine the reproduction of architectural educators and thus form the profile of practised architecture.

.2 Introduction to this research

After carrying out a literature review, it is not possible to identify a solid approach to a prescriptive educational theory (normative didactics, or a theory of teaching-learning) that influences practices in architectural education.\(^2\) Traditional, established characteristics of architectural education, such as the studio feature, are part of what can only be seen as an envelope of didactics – its form or framework. In contrast, its content would consist of theories and their applications. Even though contemporary theories of education have the

\(^2\) Researchers Jiun-de Chen and Ann Heylighen (Learning Design Teaching, KU Leuven) are pointing out that this is the case in professional education overall. My own literature review returned similar results.
potential to inform architectural education, the latter does not seem to effectively make the most of it.³

On the other hand, research on educational matters relating to architecture – either theoretical or applied – is emerging increasingly, although sporadically. This is primarily due to architects-educators who pursue their individual research interests in the fields of pedagogy-didactics and who explore applications of the resulting knowledge on their teaching. Several examples could be mentioned at this point.⁴ Rivka Oxman has oriented her research towards, and published extensively on, informing the didactics of architecture by developing design-orientated ways of thinking, derived from cognitive science. Alternatively, Helena Webster has consistently investigated theoretical issues of architectural pedagogies in postmodern frameworks and undertaken respective empirical research in architectural schools in the U.K. The thorough research carried out by Nelly Marda, who has investigated the process of concept formation in the design studio as a marker of paradigm shifts in architectural education in the U.K, should also be mentioned.

In general, with the exception of examples such as those above, academics, mentors, teachers and tutors, often teach their research but rarely research their teaching in a systematic way.⁵ One of the basic reasons is the extra investment of time and effort for someone to become acquainted with theories and methodologies outside one’s primary field of expertise. Since there is no established teaching/learning theory, such effort is by necessity individual, and therefore, for the majority, discouraging. Overall, the absence of teaching theory in architecture is evident and has both advantages and disadvantages.⁶

In the present thesis, architectural education is viewed in more ways than one: sometimes as a phenomenon, other times as a process and at others as an institution.

The thesis draws from the contemporary architectural education reality in the U.K. However, because for at least the past two decades research into the field of architectural education has circulated in a wider European and, further, globalized environment, the thesis also draws from relevant literature developed in English by international, in addition to English, speaking scholars. For instance, the section covering the pedagogy-didactics distinction⁷ draws from continental – French, German and Scandinavian – theory.

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³ In addition to previous researchers, such as Chen and Heylighen, I have supported this view in a thesis for a MA in Education, at SFSU, submitted in 2006. The current thesis supports this argument.
⁴ These examples are presented later in this chapter, section 4, where their research approach is discussed in more detail.
⁵ Reflection on their teaching practice ends up in the development of practical knowledge about teaching. See also chapter 3, sections 3.5 and 3.6.
⁶ ibid.
⁷ The distinction is analysed in chapter 3 of this thesis.
In this thesis when we discuss ‘teaching or learning in architectural education’ we imply teaching and learning in design courses (mainly in the design studio and live projects), at least to the extent that such a distinction exists within the curricula. This is because, as is acknowledged, learning in architecture takes place *par excellence* in design courses, where students indulge in creating concepts and expressing spatial qualities, and where they are expected to apply scientific (and any other) knowledge they acquire in the extra-design areas of the curriculum.

This is a non-historical, quasi-cross-sectional, theoretical study, in the sense that it is not looking to measure any change or growth in architectural education over an extended period of time. Rather, it is seeking suitable data from a relatively narrow period in time, based on the available sources, to develop its arguments and theses.

The thesis intends to contribute to a more comprehensive understanding of teaching and learning in architecture. It does so in two ways. Firstly, it highlights the didactics gap in architecture’s educational theorizing and suggests measures to remedy it by providing the foundations of a didactics specific to architecture. Secondly, to complement the results of previous research, this thesis adds a non-empirical, analytic understanding of the logic of issues in the field, hence initiating the development of an educational theory for architecture. It does so by proposing a component of descriptive didactics for architecture, so that future choices relating to didactics are justified and grounded in theory.

As it is generally acknowledged, a PhD thesis is required to make an original contribution to knowledge. Among other authors, Phillips and Pugh⁹ indicate that a high-quality PhD thesis should contribute to the production of knowledge that is useful and original within a discipline. They point out that, in the context of a PhD, ‘an original contribution to knowledge’ is a shaded term that among other things it can mean:

- making a synthesis that hasn’t been made before; using already known material but with a new interpretation, bringing new evidence to bear on an old issue...[and]
- adding to knowledge in a way that hasn’t been done before.¹⁰

The thesis must include the research design and process, to convince the readers (scholars of the field and others, including examiners) that such contribution is consistent. The statement of research design and method should involve not simply an illustration of the technique chosen to obtain and analyse data, but also an understanding of the

---

⁸ For instance, the research projects and doctoral dissertations, from which descriptive data has been drawn for this research, were undertaken between the years 1995 and 2012.
¹⁰ ibid.
epistemological and philosophical assumptions that underlie the particular knowledge generation approach, and moreover, a justification of this choice.

On the other hand, Rooke et al.\textsuperscript{11} criticize researchers who are ‘getting away with a mechanistic application of a formal research procedure’.\textsuperscript{12} Likewise, Hathaway\textsuperscript{13} is critical towards researchers who tend to select a method with relative ease, and decide on the information their research requires, without giving much thought to the assumptions underlying this choice. Smyth and Morris\textsuperscript{14} argue that most authors fail to make explicit their theoretical, epistemological or methodological positions in their theses. What this suggests is that a methodology chapter should present more than a mere description of how data is to be obtained.

This chapter (1) recapitulates the research questions and positions them within a broader framework of enquiry in the field, (2) attempts a review of the most popular research approaches adopted by architectural education scholars, (3) presents a brief theoretical account of (educational) research. Moreover, (4) outlines the researcher’s initial method of approach to this study, and how this relates to both his background and his theoretical and philosophical stance, as well as a critique of the weaknesses and limitations of that approach, and (5) concludes with a description and justification of the research approach adopted, which finally supported this thesis.

\textbf{.3 Enquiry into architectural education as educational research}

Research on architectural education raises, from the outset, an ontological question about \textit{whether it falls into the special category of educational research}, or alternatively, \textit{whether its category is determined by the very nature of architecture}. The latter leads to a new question: \textit{whether architecture adds something particular – in the sense of an ontological differentia}\textsuperscript{15} – to enquiries focusing on architecture’s education. And these questions, in turn, raise the question of what, in particular, it is about architecture that might ontologically affect research, including its scopes and methods.

\textsuperscript{12} ibid.
\textsuperscript{15} The term is used with the philosophical meaning as an attribute that distinguishes a species of thing from other species of the same genus.
The above-mentioned questions are merely indicative of an enquiry on the appropriate research design and methodology. Rather than being about a mere technical procedure of how to obtain and treat data, the selection of methodology is associated with the very nature of the research questions and ultimately to the ontology of the topic under research because it is about the nature of knowledge and how this is generated.

After all, there are theoretical and epistemological assumptions underlying any choice of research methods and there is a need to be cognizant about this, especially in the case of this research, which does not follow the rather popular (and relatively safer) resort to a qualitative, ethnographic approach. As Hathaway states:

Research methods are not merely different ways of achieving the same end. They carry with them different ways of asking questions, and often different commitments to educational and social issues. Decisions about methods have a direct impact on how we make meaning and how reality is structured and understood by researchers and their constituencies.\(^{16}\)

As a first step to exploring the specificity of architecture in order to decide upon appropriate methods for researching architectural education, one might need to start by shifting focus towards architecture’s ontology. One then realizes that, in general, statements about architecture do not seem to have a scientific character, such that would require testing them for verifiability or falsibility – as ‘true’ or ‘false’.

Because architecture exists within the domain of action (or praxis), the judgments about (hypotheses of) architecture (architectural praxis) could be attributed to the plane of intentions (of the action). Therefore, judgments and hypotheses about architecture would be tested against deontology.

When one proceeds to an action (praxis), this is judged on the grounds of one’s intentions. For instance, when someone proceeds to raising one’s hand, the intention of this action is questioned: ‘what does one intend to do or mean by raising a hand?’ The answer could bring forth a variety of intentions such as warning, signaling to stop, saluting, declaring surrender, etc. etc. The same applies to the praxis of design as well as to the praxis of teaching (design).

On the other hand, propositions about architecture’s education may be either descriptive (how things are), or normative (how things ought to be). Again, by descriptive propositions we may be addressing the intentions of actions (the educational praxis), and discuss them at the deontological level, but not at the level of their truthfulness.

\(^{16}\) Hathaway, op. cit., p. 557.
Additionally, by normative propositions, our actions are evaluated against a certain *rightness*: that is, depending on whether they are in agreement with a broader framework of propositions, which we could see as making up a reference framework of propositions.\(^{17}\) Such a reference framework can contain dominant beliefs, values and principles which, although initially may have had subjective origins, later in time became objectified and since that point in time constitute a certain norm.

Hence, the issue of the descriptive or normative nature of statements about architectural education is a factor that will determine the appropriate type of methodology to be employed when enquiring into them.

Education has an established field of research organized as a category of its own. Distinct educational research typologies unfold across curricular domains.

Possibilities for educational research unfold from distinctive approaches. One aims at developing expertise in a disciplinary tradition, i.e. expertise in anthropology, in economics, in history, in linguistics, in organizational studies, in philosophy, or in sociology.\(^{18}\) Another approach aims at developing expertise in a particularly significant area of education, i.e. in educational policy, in higher education, in international comparative education, in race-inequality-language in education,\(^{19}\) etc.

A review of the literature, however, does not indicate (at least up to this point in time) that research on architectural education has established a dominant model of educational research, and as such there is no dominant trend in architectural education research.

Architectural education is not an established discipline or major issue area (issue domain) within the discipline of education in the way that mathematics, language or medicine, are. The exception of the University of Florida ‘Master’s program in Architectural

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\(^{17}\) According to Coherence theory the truth of any (true) proposition consists in its coherence with some specified set of propositions. The coherence theory differs from its principal competitor, the correspondence theory of truth, in two essential respects. The competing theories give conflicting accounts of the relation that propositions bear to their truth conditions. According to one, the relation is coherence, according to the other, it is correspondence. The two theories also give conflicting accounts of truth conditions. According to the coherence theory, the truth conditions of propositions consist in other propositions. The correspondence theory, in contrast, states that the truth conditions of propositions are not (in general) propositions, but rather objective features of the world. The coherence and correspondence theories both hold that truth is a property of propositions that can be analysed in terms of the sorts of truth-conditions propositions have, and the relations propositions stand in to these conditions. Definition from the Stanford Encyclopedia of Philosophy, James O. Young (Summer 2013 Edition) The Coherence Theory of Truth, The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.). Available from: https://plato.stanford.edu/archives/win2016/entries/truth-coherence/ [Retrieved 04.09.2014]

\(^{18}\) These are referred as distinct directions of the doctoral program in education, at Stanford University. Available from: https://ed.stanford.edu/academics/doctoral/ships [Retrieved 04.09.2014]

\(^{19}\) ibid., Issue Domains in Education (IDE).
Pedagogy should be mentioned here. In this case, Architecture is not one of the issue domains in the university’s Department of Education. Rather, Education is, in this case, an issue domain in the graduate school of Architecture (this is this is the only program I am aware of in which this is the case). The educational objectives nonetheless seem comparable.

Planning a research approach is complicated in that it is intertwined with the exploration of the ontology of the subject under research, as already mentioned. In other words, every particular kind of being would require its own method of research. Therefore, the ontological profile of both architecture and its education could set the standards for the possibility of an original process of research. In what follows, this chapter explores the possibility of any specific trend in research methods for architectural education.

Another important point to note is that the researcher’s overall worldview and culture plays a role in the equation of the research approach. As Hathaway put it:

There are underlying philosophical assumptions that structure beliefs about methodology, knowledge and reality. To choose a method implies a belief about what is knowing, what is reality and what methods are appropriate to measure them and finally a belief about the researcher’s role.

It is broadly admitted that in qualitative, as well as in quantitative research there is no ‘objective’ observation or even measurement, nor are there unmediated facts. Further, there is no neutral observational language and the researcher cannot dissociate as subject from the cultural and historic phenomena of her time. Just as an example, we can consider the case in which the survey has been chosen as the method to research architectural studio life. The statistical analysis of the survey results, which will follow, will generate a description of only certain aspects of the studio life. These aspects cannot help but be limited to the perceptions of the people who developed the survey and may not reflect the perceptions and experiences of those who answered it.

From another perspective, the worldview of the researcher, her/his certain approach to the world, and of architectural education in general, will determine the limits of the research.

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20 Holds its mission to be the provision of its graduates with a thorough understanding of the ways in which architectural education has evolved in response to changing cultural and disciplinary conditions both nationally and internationally. Retrieved from: [http://gsoa.dcp.ufl.edu/degrees/special-academic-programs/architectural-pedagogy-program/](http://gsoa.dcp.ufl.edu/degrees/special-academic-programs/architectural-pedagogy-program/)

21 They aim at ‘educating passionate teachers who will demonstrate reflective teaching practices and thoughtful scholarship as well as a commitment to their ongoing professional development’. Available from: [http://gsoa.dcp.ufl.edu/degrees/special-academic-programs/architectural-pedagogy-program/](http://gsoa.dcp.ufl.edu/degrees/special-academic-programs/architectural-pedagogy-program/) [Retrieved 04.09.2014]

22 Hathaway, loc. cit.

.4 A review of the most popular research approaches adopted by scholars of architectural education.

Before proceeding to decide upon which research approach and research methodology one will follow, it is essential to explore the possibility of an established trend in the field. In our case, it would prove useful to know whether scholars pursuing research on the topic of architectural education follow a pattern in terms of their research approach, or have already established a trend. For example, the educational research community since the late 1970s is engaged in a debate over the degree to which quantitative and qualitative methods can be combined. Researchers have since been found to fall into three perspectives in this continuing discussion: (1) the purists, who deny any possibility of combination relying on the divergence of the two philosophies, on which each of the approaches is grounded – for them assumptions about the world, truth and reality are incommensurable, (2) the situationalists, for whom certain methods are more appropriate for specific situations and the choice of method is partially determined by the questions to be answered – practically researchers alternate between the two approaches, and (3) the pragmatists, who believe that qualitative and quantitative methods are capable of informing one another in the research process – it’s not about alternating between the two, instead are both used simultaneously: interviews, surveys, questionnaires and observation techniques in the same single study.  

Literature review in the field of research on architectural education has not returned findings about any existing meta-research that would identify and indicate a prevailing paradigm or trend of how research is pursued in architectural education, or what areas are investigated.

Consequently, I proceeded to review the small number of doctoral dissertations and research outlined in published papers, of which the topic was architectural education, to draw some initial conclusions. The small number of meaningful returned results consisted of four doctoral dissertations and a number of research projects, all undertaken in the U.K. in the years between 1995 and 2012. These works, as well as their research approach and methods, are presented below in chronological order.

The research undertaken by Nelly Marda towards the doctoral dissertation titled ‘Architectural concept formation – transmission of knowledge in the design studio in

24 Hathaway, loc. cit.
25 Review of published research on architectural education, at doctoral level, undertaken in the U.K., which covered a period between 1996 and 2012. The terms ‘studio/design project’, ‘live project’ are included in the title and/or content of the research. Research published in papers, undertaken and authored by Webster, H., covered the period between 2001 and 2007.
relation to teaching methods’, is quantitative, partly by participant observation. The approach can be more appropriately identified as a causal-comparative piece of educational research. It intends to monitor change over a period of time and even record a shift of educational paradigm in architecture, while at the same time analysing learning development through the study of a number of parameters. It is suggested that the domain of study is descriptive didactics.\textsuperscript{27} The field work takes place primarily in architectural reviews of the design studio in first and third year. The study constructs two case studies representing two distinctly different chronological periods (between the late 1980s and early 1990s) of two different architecture schools (Bartlett and Greenwich), with the objective being to identify a pattern of shift in architectural education. In each of the two cases, in the respective chronological periods, the researcher was present, which makes this research non-historical (the investigated phenomena did not belong to the past when research was pursued). It records, transcribes and transforms into text, the verbal transmission that takes place, and aims to reveal mechanisms of architectural concept formation in students. It treats the original data generated by the project mainly by linguistic analysis (content and structure of texts). The thesis concludes with the observation of a shift in architectural education paradigm, during the said chronological period, from the intellectual-conceptual approach to teaching, to the intuitive and experiential approach of learning. This research is situated towards the applied end in the basic-applied research continuum. It intends to have immediate educational implications on studio teaching methods, studio settings and programmes, through the building of a theoretical understanding of learning development in architecture.

The doctoral dissertation by Sara\textsuperscript{28} is titled: ‘\textit{Between Studio and Street: the role of the live project in architectural education’}. The research is a combination of qualitative and quantitative educational research, aiming at theory-building. Parts of the data are obtained by quantitative methods (surveys, questionnaires), then analysed by means of qualitative approaches (enriched by depth and meaning) to fulfil an objectivist-quantitative goal (generalisability). Another part of the data is obtained by qualitative methods (ethnographic, autobiographical account and case studies) to fulfil the same objectivist-quantitative goal (generalisability). The empirical study consists of three parts: an autobiographical account (the researcher’s experience while still a student), a case study (researcher is a participant observer by being the tutor in the research sites) and a survey (through questionnaires

\textsuperscript{27} Descriptive didactics as is defined in the chapter 3.
\textsuperscript{28} Rachel Sara, \textit{Between Studio and Street: the role of the live project in architectural education} (Doctoral dissertation), University of Sheffield, 2004.
addressed to students and tutors in other schools of architecture). The study involved long-term immersion in the research setting, where researcher is participant. The thesis relies on original data generated during this research. The research results in the extraction of meanings and understandings, and supports and validates an emerging theory. The thesis traces the history of the design studio to provide a description and a critique of the normative model. It then explores the studio and the live projects in the context of educational theory and praxis. It concludes with a best-practice guide for implementing live projects, although among the limitations of a scientific and disciplined inquiry approach, such as this case, is the inability to answer ‘should’ questions.29 In terms of its position within the research continuum of basic-applied, this research would be situated at the applied-research end, based on the degree to which the research findings have direct applicability (in the form of the best-practice guide).

The doctoral dissertation by Koutsoumpos is titled: ‘Inhabiting Ethics: Educational praxis in the design studio, the music class and the dojo’.30 The research is a combination of ethnomethodology (qualitative) and philosophical (non-scientific) enquiry. The qualitative part of the research is based on participant observation. The thesis takes the form of a clarification process towards understanding and relies on original data generated during research. The domain of the study is perceived to be at the intersection of didactics and pedagogy. The field work takes place in the architectural design studio (participant observation), in music class and in a dojo class. As a practice-led study, it intends to reveal the implicit role of ethics in the practice of the design studio. The philosophical part of the enquiry discusses the necessity of division of the wider discourse on Ethics in two sub-themes, those of ethics and morality. In the continuum of the basic-applied research, this research would be situated towards the basic-research end, as it is seeking to develop (or refine) a theory.

The last doctoral dissertation reviewed is by Brown, titled: ‘A critique of the Live Project’.31 This piece of educational research employed a qualitative approach, consisting of a survey and a grounded theory. For the first part, interviews and questionnaires were addressed to a sample of architectural educators to solicit their theoretical understandings and practical experiences. For the second part, the gathered data is used to construct a critique of the live project, of the broader activities and cultures [sic], and is intended to

29 Gay and Airasian op. cit., pp.7-8.
30 Leonidas Koutsoumpos, Inhabiting Ethics: Educational praxis in the design studio, the music class and the dojo (Doctoral dissertation), University of Edinburgh, 2009.
formulate a grounded theory. The philosophical framework of the research design is identified as social constructivism. The author situates the qualitative/empirical research at the opposite end of the pragmatist and positivist paradigm. The research, based on its findings, should be situated at the basic-research end in the continuum of the basic-applied research, as it is seeking to develop a theory.

During roughly the same chronological period, Ewing designed and pursued an educational study intending to explore the field trips and site visits as a didactic tool in architecture.  

The researcher combined quantitative and qualitative approaches. The research is classified as descriptive. It presents the typical characteristics of this form of research: (i) it involved a large sample, more precisely, the total sum of architectural schools in the U.K., (ii) descriptive instruments consisted of questionnaires, which (iii) sought to answer questions about the current status of the subject of study. The numerical data gathered was intended to form a detailed database for future reference for the topic. Literature refers to a typical problem, which complicates descriptive research, and this is a failure, by a relatively high number of participants, to return questionnaires. In terms of its position within the basic-applied research continuum, this research would be situated at the applied end of it.

A significant amount of research on architectural education has been undertaken and publicized by an established scholar in the field, Helena Webster. A number of these research projects investigated several of architecture’s didactic tools such as the design diary, the design jury and didactic conditions such as the tutor-student relationship in the design studio. Webster employed a variety of qualitative research methods in these projects. Often, this has involved in-depth qualitative (naturalistic) cross-sectional research of case studies involving non-participant observation. The instrumentation most often consisted in semi-structured interviews, not excluding questionnaires. Other times it involved analysis of textual data. The objectives ranged from revealing live experiences of the subjects to producing a new, more nuanced reading of the conditions under study. Critical and post-modern educational theories underlay these enquiries and the choices of the research.

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32 S. Ewing, ‘Field Trips/Site Visits: What is their place and value in Architectural Education?’ is the research project that received in 2009 a Grant from the CEBE Innovative Projects Learning and Teaching.

33 Helena Webster is academic in Architecture, Oxford Brooks University.


37 Involving the works of theorists as P. Bourdieu, M. Foucault, J. Dewey and G. Stevens.
approaches (i.e. ethnographic) were consistent with these theoretical frameworks. Each research project was consistently documented by the researcher in order to identify research limitations and weaknesses. Most of Webster’s research is positioned at or towards the applied-end of the basic-applied continuum.

It may prove useful to broaden the picture of this review with two more particular examples of research, even if they require transcending its chronological and geographical boundaries as set previously.

Firstly, it would be an omission not to refer to an emblematic study of architectural education, particularly its design studio feature, carried out by D. Schön in the 1980s. Originating in the U.S., in an attempt to offer an epistemology of practice, this research was based on the close monitoring and subsequent analysis of how architects (among a small number of other practitioners) actually teach and learn in the design studio. Study of design education on-site consisted in analysing audio-taped protocols from teaching and learning sessions in the design studio, with the objective of understanding them and revealing central features of education in design.

The work is characterized by the rich descriptions of the educational situations that it offered, drawing attention to the reality of architecture’s design studio and ultimately presenting it as the paradigmatic didactic tool for all professional education. Indeed, Schön offered, a new set of ideas about, not only how design is taught and learnt, but innovative concepts of all professional practice as ‘design-like’ and even of the university itself as a collection of schools of design.

Although influential to architectural educators for a long time, Schön’s work has been recently criticized for the dubious validity of the implemented research methods, for narrowness in the understanding of the gathered data and for partiality of the analysis of the situations observed, by engaging exclusively with a cognitivist lens at a moment in time when the educational theory paradigm was just exhibiting signs of a shift towards situational and social orientations.

38 Donald Alan Schön, Professor of Urban Studies and Education at the Massachusetts Institute of Technology, was trained as a philosopher. He became an influential thinker who contributed to the development of the theory of reflective professional thinking and learning within organizations and communities. This thesis makes reference primarily to the following works: 'The design studio. An exploration of its traditions and potentials' (1985) and ‘The Reflective Practitioner: How professionals think in action’ (1983).
39 Research undertaken by Webster provided evidence that architectural educators have been using Schön’s notion of reflection to enhance students’ learning. More generally, it has been evidenced that notions of reflection have a clear resonance with architecture students and tutors (Webster, 2004b).
The second example that is brought into this review transcends the geographical boarders of the U.K., originating in Australia. This study of architectural education is a sub-section of a broader project on a sociology for architecture, and takes the form of sociology of architectural education. Using the conceptual apparatus of French sociologist Pierre Bourdieu, this work by Australian architect and sociologist G. Stevens\textsuperscript{41} investigates the system of architectural education in terms of sociology, based primarily on statistical evidence from English-speaking nations worldwide.\textsuperscript{42} Steven’s research subscribes to structural constructivism\textsuperscript{43} in alignment with P. Bourdieu’s research approach.

From the review of the above doctoral research with focus on architectural education, a common characteristic of their research approach becomes apparent: the approach is qualitative rather than quantitative, and in most cases involves ethnographic methods. Additionally, the researchers tend to rely on original data, which they have generated themselves as part of their research. For this purpose, they have employed empirical instrumentation such as (participant, semi-participant or non-participant) observations, (structured, semi-structured) interviews, questionnaire surveys, and case studies to generate knowledge. They may either have had codified variables and demonstrated cause-effect relations to associate them or offered innovative readings of a known condition, or even shed light on the opinions and lived experiences of their subjects.

It is common knowledge that a qualified PhD thesis ought to contribute something useful and novel to its respective research area\textsuperscript{44} (although Hughes\textsuperscript{45} states that this is not a \textit{sine qua non} condition). It is therefore fair to assume that generating and using original data is considered by researchers of architectural education a safe and convenient way to develop original conclusions.

On the other hand, the fact that in all reviewed cases of research on architectural education, instrumentation is constructed and then conducted by the researchers themselves may unavoidably raise a question of subjective bias. In addition, this kind of data is soft\textsuperscript{46} (not objective).

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\textsuperscript{41} Garry Stevens, Australian architect and sociologist, former academic, is the founder of the Key Centre for Architectural Sociology.

\textsuperscript{42} Namely, from Australia, the U.S.A, Canada, the U.K., Ireland, Republic of South Africa, and New Zealand.

\textsuperscript{43} Structural constructivism, a mostly French research tradition, developed some of P. Bourdieu’s theoretical tools.

\textsuperscript{44} Phillips and Pugh, loc. cit.


\textsuperscript{46} A definition of the Cambridge dictionary holds that ‘soft data’ is ‘information about things that are difficult to measure such as peoples’ opinions or feelings’. Definition of ‘soft data’ from the Cambridge Business English Dictionary © Cambridge University Press. Available from: http://dictionary.cambridge.org/dictionary/business-english/soft-data [Retrieved 12.07.2015]
In theory, conclusions drawn from surveys, case studies, interviews, questionnaires and observations can be projected as representative of the whole population under study, provided that the sample has been selected appropriately, the questionnaires (or interviews) have been subtly designed and receive honest answers and are then treated by accurate data analysis, statistical or other.\(^{47}\) In practice, an opinion collected by an interview, for instance, depends on the design and procedure of the interview (instrumentation) as much as it depends on the pre-existing opinions of the subjects (respondents). In contrast, hard data is theoretically independent of the way it is collected, i.e. the ratio of students against tutors in the design studio.

Since subjectivity cannot be eliminated from research processes, and little data can be hard when it comes to research on architectural education, it is essential that the researcher makes explicit her/his epistemological, theoretical and philosophical positions vis-à-vis the research undertaken, so that consistency between the nature of the enquiry and the methodology employed is secured, awareness about the limitations of the research is demonstrated, and the results are put into perspective with these limits in mind.

.5 Educational research and methodological approaches

What is educational research? Is it any or all research which studies the topic of architectural education? And, if so, what is its significance?

The definition of educational research that Gay and Airasian\(^{48}\) give is the systematic application of a family of methods that are employed to provide trustworthy information about educational problems. They explain that it is ‘the application of the scientific and disciplined inquiry approach’ to the study of educational problems and extend their definition by providing the secondary conditions that it produces:

Once research questions are explained or understood, many secondary purposes of research come into play, such as helping others understand the research results, using those results to predict or improve future research and practice, and raising new topics or questions to study.\(^{49}\)

It is noteworthy that the same authors refer to the limitations of each single research study as evidence that the same results will apply to all or most settings like the one in which research took place. Conversely, they claim that educational research is an ongoing process which, only when based on accumulated understandings and explanations that are taken together, can lead to generalizations about educational issues and ultimately, to the development of

\(^{47}\) Gay and Airasian, loc. cit.
\(^{48}\) Gay and Airasian, op. cit., pp.3-5.
\(^{49}\) ibid.
theories.\textsuperscript{50} It is uncommon that any single study concludes with definite answers to its research questions – rather it is understandings provided by many studies that promote further research and understanding of educational issues and practices.

An alternative approach to educational research is provided by UNESCO\textsuperscript{51} which revisits the original meaning of research as the orderly investigation of a subject matter for the purpose of adding to knowledge. Two possible variations of meaning suggest that: i) with the prefix \textit{re-} (re-search) it is implied that the subject matter is already known but needs to be studied again, and ii) without the prefix, it typically means investigation of a new problem or phenomenon. Educational research then, aims at informing educational planning for change in the educational systems. The objective is always to make changes that lead to the systems’ improvement, and it is at the stage of assessment (of existing practices as well as of changes) that educational research plays a key role in informing educational planning and policy advising.

Among various other definitions, a general one\textsuperscript{52} states that \textit{educational research} aims at evaluating different aspects of education including student learning, teaching methods, educator’s training, dynamics of the educational setting, etc. by employing a variety of methods.

As Gay and Airasian\textsuperscript{53} suggest, since the early 1920s educational research has been implementing ‘the methods of science’ – the quantitative research methods – to obtain and promote understandings of educational questions, processes and practices. According to Monroe,\textsuperscript{54} between 1900 and 1940 there were already about 50,000 research studies published. Most of them were what Jones\textsuperscript{55} classified as ‘technological’ (in the sense that their essential feature was a counting and enumerating of data, involving vocabulary counting, frequency of language errors calculations, etc.) and as ‘descriptive’ in nature. It was during the second half of twentieth century that educational research developed, when it shifted gradually from the positivist scientific paradigm. Its production flourished when it began to draw on newer methods in the social sciences (primarily qualitative research methods). Further development has brought to light the necessity to specify educational

\textsuperscript{50}ibid.
\textsuperscript{52}This is a general definition in that it does not distinguish between curricular domains as foci of educational research. Available from: http://en.wikipedia.org/wiki/Educational_research [Retrieved 08.09. 2013]
\textsuperscript{53}Gay and Airasian, 2000.
\textsuperscript{55}Idem.
research among curricular domains such as arts, mathematics, literacy, language, science, early childhood, adulthood, etc.

A more consistent historical account of the evolution of educational research is presented by Englund from a continental European perspective. In relation to this account, during the early 20th century, while education was still developing as a discipline, educational research was emerging from philosophy. However, this link with philosophy weakened very early (only to be revitalized in the last years of the century) when initially psychology and later sociology became its major influences for the most part of the century. Before the 1950s and 1960s, psychology dominated the field, orienting the focus of educational studies on the basic conditions of development and learning, at the individual level. With the introduction of sociology as a more significant auxiliary science to education during the 1950s and 1960s, the focus shifted to the basic conditions for education, at the social level this time. This was consistent with the developing view of education as a vehicle for social mobility. As a result of the establishment of education as one of the social and behavioural sciences at that period, quantitative research approaches were increasingly adopted by those working in the field. The same scholar elaborates on the conditions of the 1960s:

The dominant investigative paradigm was the Anglo-American mode, with great reverence for experimental design in the empirical-positivist tradition. Experimental design was regarded as the ideal, surveys as second best, and observational description as an unsatisfactory substitute.

In the late 1960s and during the 1970s, the dominant quantitative approach to educational research was challenged by a number of different qualitative methods. It had already become evident that both research questions and newly generated knowledge required an approach that transcended the capacity of traditional quantitative methods.

The process was accelerated by the fact that during the same period traditional sociology of education was challenged by the new sociology of education: the consensus and functionalist view of society that structured the conceptual world of traditional sociology of education was questioned by the conflicting perspective of the new, critical sociology of education.


57 Englund, loc. cit.
Looking at these issues from the perspective of the Swedish educational research, Englund\textsuperscript{58} identifies the distinct qualitative approaches as they gained significance: the hermeneutic approach of Germany, the qualitative methods, imported from the Anglo-American academic world (including ethnography, ethnomethodology and other investigative methods inspired by anthropology and by symbolic interactionism) and finally, phenomenography – a type of qualitative method, specific to educational research and exclusively developed in Sweden during the 1970s.

During the 1980s, the dominant trend of educational research, coined by Englund as ‘didacticisation’, focused on two didactics-oriented developing traditions, which were identified as the most significant internationally: ‘teaching and learning’ and ‘curriculum theory’. They were based on phenomenography and curriculum theory, respectively.

Englund concludes this account with the 1990s, when educational research took a ‘linguistic turn’ – involving an extensive shift in emphasis towards language and communication – which resulted in the emergence of various new perspectives. Additionally, the philosophy of education experienced a powerful renaissance, partly as a reflection of the new focus on language and communication, but also in other respects, leading to a reawakening of interest in both classical and modern philosophy of education. At this point Englund becomes critical towards the meaning of change by claiming that, in certain respects, these changes can be regarded either as conservative (having reinforced already established positions), or as subversive (in which cases they also guided in new directions). To better express the dual possibility of the linguistic and communicative turn as either cynical or idealistic, he recalls a comparison between Dewey and Foucault by Rorty:

One can emphasise, as Dewey did, the moral importance of the social sciences –their role in widening and deepening our sense of community and of the possibilities open to this community. Or one can emphasise, as Michel Foucault does, the way in which the social sciences have served as instruments of the “disciplinary society”, the connection between knowledge and power rather than that between knowledge and human solidarity.\textsuperscript{59}

Like any research that aims to study social phenomena, research investigating the educational phenomena has to be associated with a particular philosophical position. Subsequently, the options are then to draw from either the natural sciences or the social sciences. Selecting between quantitative and qualitative approaches underlies assumptions about the paradigms that ground these approaches.

\textsuperscript{58} ibid.

Quantitative methods in educational research are mostly based on the collection and analysis of numerical data, also involving the formulation of hypotheses, the controlling of contextual factors, the use of large populations for samples and reliance on data processing by means of statistics. Its main characteristic is that researchers have little personal interaction with the human subjects of their research, since most data is gathered through questionnaires, checklists and tests, amongst other paper-and-pencil instruments. Theorists, including Gay and Airasian,\(^\text{60}\) claim that underlying quantitative research is the assumption that the world under investigation is relatively stable, uniform and coherent, and thus measurable, understandable and generalizable. This view of the world, which may be held by some educational theorists, was adopted from the natural sciences.

In qualitative research, on the other hand, among other characteristics, is the fact that the research questions or even the problem to be studied are defined during the process rather than from the outset (there is no initial hypothesis to be tested). Data, which is generally not numerical, is obtained through instruments such as recordings, documents, interviews and observation. Additionally, data is gathered from a deliberately small sample, the objective being to obtain deeper understandings through the development of narrative descriptions of the subjects and their contexts. Generalizations of the drawn conclusions are not sought in qualitative research.

\(^{60}\) Gay and Airasian, op. cit., pp.9-10.
Conversely to quantitative research, underlying a qualitative approach to educational research is the belief that the world is neither uniform, nor stable and coherent. Consequently, ‘truth’ in terms of quantitative research is not to be obtained since perspectives of reality inevitably vary across (groups of) subjects.

The most common distinction between the philosophies is the empirical-analytic and the interpretive distinction.

On one hand, it is commonly held that the empirical-analytic paradigm is associated with positivism. Given that various traditions of positivism have been developed, researchers may subscribe to different ones. 61 Hence, researchers within the Comtean 62 positivist tradition hold that the scientific method can be applied to human experiences, and thus they focus on observable, objectively determinable phenomena. Conversely, those within the tradition of logical positivism accept something as meaningful if and only if it is verifiable.

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empirically (directly by observation through the senses). This distinction is also captured by the terms hypothetico-deductive and objectivist.

In contrast, the interpretive enquiry can be described by terms such as phenomenological, hermeneutical, experiential, dialectic. Alternatively, it can be referred to as naturalistic, inductive and relativist enquiry. Although many of these categories can be identified with interpretive approaches, the reverse is not possible.

Researchers engaging in the positivist paradigm are those who employ quantitative methods when pursuing educational research. Their research is characterized by the application of natural science methods to social phenomena and an attendant focus on explaining human behaviour. Ontologically and epistemologically it is founded on an objectivist approach, focusing on causality and generalizability. At the same time, as Smyth and Morris argue, positivism focuses on identifying general patterns based upon cause and effect, and marginalizes the particular.

When educational researchers take the interpretive approach, using qualitative methods, they tend to focus on understanding human behaviour, providing complementary insights, and enriching understanding of the perspectives of those who work in the sector. Ontologically and epistemologically this approach is itself founded on the subjectivist approach, emphasizing localized, subjective meaning. To this end, Smyth and Morris argue that focusing on the particular frustrates the emergence of general patterns, of shared meanings and of normative recommendations.

It should be noted that educational research from its outset developed in the context of primary and secondary education. With postsecondary, higher education expanding to a networked and organized, massive and ultimately competitive institution later in the twentieth century, it is fair to assume that educational research and its theory have, for a long time, failed to present a cohesive account of education taking place at university level. It is only in very recent years that educational research has been undertaken in higher (tertiary) education both in general and in relation to particular domains (medical education, construction management education, psychology education, etc.). Eventually, architectural education emerged as a domain that has a role to play in educational research.

While keeping a mental note about the particular curricular domains in educational research, it is useful to explore established types of educational research studies, and also

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63 Hedley Smyth and Peter Morris, op. cit.


65 Hedley Smyth and Peter Morris, op. cit.
ways in which they may be classified. An initial distinction should be made between basic and applied research, with the basic criterion being whether the research under question intends to develop – or refine – a theory, or to solve immediate practical problems of education. According to Gay and Airasian\textsuperscript{66} most educational research is situated at the applied end of the basic-applied continuum.

Generally, quantitative research approaches aim at depicting current conditions, investigating relationships and studying cause-effect phenomena. Common to educational research types of quantitative approach are: descriptive research, correlational research, causal-comparative research and experimental research. Gay and Airasian\textsuperscript{67} elaborate on these types as follows.

In descriptive research (survey research) the focus is on preferences, interests, attitudes, or concerns of some group of subjects, of which numerical data is collected by self-administered instruments or telephone polls. A major problem with this type of research is the reluctance of participants to respond or cooperate.

In correlational research the objective is to determine the degree of correspondence between two or more variables. A correlation is the quantitative measure of the degree of such relationship (i.e. students’ CAD command and performance in design projects). Between the examined variables there is no causal relationship necessarily.

In contrast, causal-comparative research investigates cause and effect relations between different groups, methods or programmes. Of these, the part that is thought to make a difference (the causal factor, or treatment, or independent variable) is not determinable by the researcher because it has either already occurred, or because the researcher cannot manipulate it. For this reason, this type of research is suitable when it is unethical or impossible to influence the causal factor. Because of the said lack of control, conclusions are usually tenuous.

Similarly to the previous approach, experimental research deals with cause and effect relationships, only in this case the researcher has control over the selection of participants (and the treatment they will receive), in addition to contextual variables. Due to higher level of control exerted by the researcher, true cause-effect statements can be made in this case.

At the other end of the spectrum, qualitative approaches aim to present in-depth descriptions of aspects of peoples’ everyday perspectives and context, by using a number of methods such as ethnology, ethnomethodology, case study phenomenology and symbolic interaction. The detailed descriptions and interpretations of participants and their context are

\textsuperscript{66} Gay and Airasian, op. cit., pp.7-8.  
\textsuperscript{67} Gay and Airasian, op. cit., pp.275, 321, 349, 367.
field-focused. The researcher is immersed in the setting and it is assumed that they are not independent of participants and contexts. Observation (at times, participant observation), interviewing and recording by technological means, as well as examining artefacts, are the methods used to acquire data, which is then analysed to produce descriptions and explanations. A differentiation between the qualitative and the quantitative research is that the qualitative researcher is committed to recording the views of the participants rather than his or her own view.

Historical research is a type of qualitative research that deals with interpreting past events. Data is already available in various forms. Sources of data are distinguished between primary (provided by first-person eyewitnesses or authors) and secondary (non-first-person).

Within this framework, I suggest that it may prove useful to consider research on architectural education (initially) as educational research.

### 6 The research approach of this thesis

The approach to this research has not been monolithic throughout the course of this study. It has undergone a challenging passage of suspense between the safety of the known and the temptation of the unfamiliar. Perhaps unpredictably, a significant change in the research approach was decided on about halfway through the endeavour. This took place in direct association with a re-positioning of this particular research within the broader context of pre-existing enquiry on architectural education and a certain redefinition of the research questions.

The shift in research approach – and in the respective methods – came about as the argument pursued by this thesis developed, and didactics began to be increasingly prioritized over pedagogy in the study of architectural education.

The evolution of this research approach can be seen as having developed over two distinct periods.

During the first part of the study (from October of 2006 until approximately the end of 2009) the research approach developed under the influence of the author’s latest involvement with educational research, which had dealt with critical and postmodern theories of education and with an emphasis on architectural pedagogies. This influence was unavoidably associated with a prevailing trend in educational research, more interested in qualitative and ethnographic methods. Consequently, the research work started to design a relevant

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68 The term is used here with the philosophical meaning as an attribute that distinguishes a species of thing from other species of the same genus.

69 This was in the framework of a postgraduate study in education, which led to a Master’s Degree in Education at San Francisco State University (2004-2006).
methodology and the preparation of an appropriate instrumentation, as will be described in more detail in the following part. This decision was consistent with the evident domination of this type of enquiry in relation to pedagogy.

During the second part of this study (mostly during the years 2011 and 2012, which had just followed a period of interruption) a distinct research approach had already matured in order to address different kinds of questions, which, on an epistemological level, were emerging as a response to a lack of inquiries into architectural education up to that point. This new condition could be seen as a rejection of the previous stage but, more importantly, it allowed for a new perspective on the results and contribution of this research. Among the reasons for this change were: (a) a need to transcend limitations of the established methods of enquiry and, hence, of their results in theses, and (b) a need to change the perspective from which the questions were approached, which in turn would call for an alternative research approach to maintain consistency with the nature of the questions. This less common approach deviated from what appeared as a trend in researching the field of architectural education and has possibly attributed in a sense to the identity of this research.

It is fair to assume that the resultant research format has been shaped by the synergistic combination of both what it was to become but did not and what it finally aimed to be. The research itself is ultimately nothing more than the function of the two distinct conditions that represent the two distinct research approaches in the course of time. Further, the objective of this research evolved to become a bridging of these two distinct conditions (of viewing the questions about architectural education from these different perspectives; on one hand, pedagogy, and on the other, didactics) to benefit the overall enquiry.

Efforts, preparation and processing of the research steps that have not been visibly reclaimed in this thesis have nonetheless proved meaningful in determining the researcher’s new ‘coordinates’ within the field with regard to this thesis. This to a certain extent, in turn, shaped the results of this research.

Opting for an agonizing navigation through the uncharted waters of a research approach in the field, of its tactics and design, practically directed the thesis’ enquiry towards some appropriate, worthwhile questions.

It is for these reasons that it is essential to list the research steps of both, the initial and the final approach in order to promote a better understanding of the thesis’ argument. The argument was developed and formulated in the transition from one stage to the next.
.6.1 The research approach of the initial stage

I initially thought that a descriptive approach to architectural didactics through the identification and itemization of didactic tools currently utilized in architectural education would be a crucial part of this research. The objective was to view them in the broader context of the theoretical and philosophical tendencies that schools claim to espouse, examining them for consistency against the corresponding theories of education. To put it another way, the didactic practices in the schools (as perceived through the operation of the didactic tools) would be collated with their expressed educational and philosophical claims, as these became evident from various educational documents.

This research, primarily archival, would focus on various types of documents produced by architectural schools both as institutions and also as part of the educational process. In order to verify the credibility of cross-validating the data relating to this research, the researcher would resort to triangulation: seeking for similar information in different (independent) sources.

Therefore, in addition to archival and other forms of educational documents, the researcher had considered alternative sources. One of these was the process of inducting novice tutors in architectural education, with the potential for approaching this in a tacit way. The induction of novice tutors became an important subject of the research, further justifying the choice of research methods.

Thus, in a search for regularities in the collected data to identify recurring results, the researcher would seek for a didactic culture that (embedded in the teaching practices, or in underlying knowledge, values and assumptions) is passed on from established teachers and from the institutions to novice tutors in design courses. The thought behind this was that as the community of architectural educators (like other academic and scientific communities) has to renew itself, the traditions of the teaching-learning culture in architectural education are transmitted from one generation to the next, while at the same time change may be incubated. Reproduction of the field takes place in schools and departments, in universities and, to a certain extent, the community of educators renews itself by employing novice tutors.

Moreover, educators of architecture – particularly during the era of globalization – are members of an identifiable academic community, which in many cases has boundaries that exceed individual academic institutions, and are connected through a web of transnational
institutions and associations, such as the EAAE, ACSA, SAARCH, SEBE, etc. Information about the reproduction of the field was expected to be found in the discourse developed by such institutions.

For these reasons, the research design suggested that the process of induction of novice tutors in architecture, whether by formal or informal processes, would provide an interesting window of information within the scope of the present research. What’s more, in addition to apparent didactic tools, covert perceptions of teaching and knowledge about teaching-learning in architecture could be examined. In reality, novice tutors are in fact gradually learning the diverse criteria for successfully teaching in architecture and for successfully moving on to an academic career.

In light of the aforementioned scarcity of explicit theorizing of teaching-learning in architecture, the author speculated that during the induction of novices a transmission process would involve communicating implicit perceptions and theoretical assumptions about teaching in architecture. Further, he suggested it would provide a critical insight into both formal and informal knowledge transmission about teaching in architecture: including the didactic tools and the norms, values and characteristics of teaching. It was also assumed that while pedagogical matters are expressed in and communicated by written documents (educational objectives, policies, proclamations, etc.), pure didactic knowledge (of how and what) is imparted implicitly through such processes.

Therefore, the author presumed that part of what is transmitted is common sense (hence transparent to the insiders) and thus didactic assumptions and underlying teaching principles would pass unchallenged. As Geertz elaborates, ‘educating novices actually occurs in the informal annotations of everyday experience called common sense’.

Put in a different way, the induction of novice tutors in architectural education was seen at the beginning of this study to consist mainly of the transmission of established meanings (about architecture, knowledge, education, teaching, and ideas like charisma, talent, creativity etc.) in a natural way, during established and unquestioned daily routines, rather than through explicit principles and guidelines of teaching architecture that would be

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70SBSE: the Society of Building Science Educators is an association of university educators and practitioners in architecture and related disciplines (http://www.sbse.org). SAARCH: South Asian Association for Regional Cooperation of Architects was founded in the year 1991 in Colombo with the objective of assisting the development of national architectural institute bodies within the South Asian Region.


72With reference to the general distinction between the categories pedagogy and didactics.

founded on theory. These might also include paradigmatic stories, told about important people and events, or about architects who are great teachers of architecture.

It was thought that it would be worth investigating which educational assumptions an experienced member of the teaching community passes on to the novice, in relation to such issues as: the relative position of teacher-student, teachers’ perceptions of their students as learning subjects, the current canon of architecture, values embedded in the model of knowledge transmission, values embedded in the kind of architectural knowledge, etc.

6.1.1 Data collection

For this part of cross-sectional, descriptive study, the intention was that data would be collected through self-report. More specifically, I had intended to use a questionnaire as the method of acquiring data, although in specific cases I would use semi-structured interviews. The participants would be a selection of novice tutors who were working for architectural schools included in the sample. The intention was to use the entire population of tutors in these schools, with a tutoring experience of 1-6 semesters.

The questionnaire would be organized by conceptual-orientated sections in order to provide information about different aspects: (1) demographic information about the respondents, (2) perceptions of teaching and of the role of the teacher that respondents, (3) information relating to processes of didactic experience transfer to the respondents, (4) information on didactic matters, (5) information about the respondents’ grasp of didactic theory in relation to concurrent educational theories and (6) information about the use of didactic tools as perceived by the respondents.

Demographic information about the participants (age, gender, how many semesters of study they had completed, studies, background, etc.) would allow for comparisons between respondents of different subgroups and also for cross-referencing with information from other sections (i.e. a respondent’s background information could be associated with their perceptions of the role of education).

It was considered worthwhile to distinguish from the outset between two categories of novice tutors: beginners and those with some experience (hence the quantification of tutoring experience from 1 to 6 semesters). Certain questions in the demographic section of the questionnaire would address this issue. The hypothesis was that novice tutors with the least experience would be able to more explicitly reveal ideas, norms and perceptions about

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teaching and learning, since they did not have enough exposure to practice to internalize assumptions and routines. Additionally, it was deemed more likely that they had received direct advice from the established members of teaching staff (supervisor, studio master, mentor, professor) during their first steps into teaching. Novice tutors with some teaching experience were more likely to possess implicit ideas about norms, perceptions and assumptions about teaching and learning in architecture, since their exposure into teaching practice might have enabled them to internalize routines that would then make these ideas transparent to an observer.

Moreover, it would be worth investigating the stage of career or study at which study or career a young architect decides to become an educator. Also, it would be useful to obtain information about the personal motives for one to enter the community, and what incentives are offered by the academic community in both architecture and the educational system.

.6.1.2 Research approach

The initial-stage approach to the research project of this thesis was based on two principal aims. The first aim was to distance oneself, as researcher, from the field, by following concrete measures such as abstaining from teaching processes. In ethnographic research, strangeness to the field is seen as an important condition for capturing and identifying the cultural assumptions of a community\(^\text{75}\) – in contrast, shared common sense and cultural expectations between observer (fieldworker) and the community under observation is transparent and thus undetectable.\(^\text{76}\) To work in an unfamiliar setting – in our case in a different architectural school, or, even better, in a non-architectural educational setting, allows one to acquire strangeness (that is, to distance oneself). It should be noted at this point that in order to maintain strangeness to the greatest possible extent, I opted not to engage in tutoring at the architectural school of the University of Edinburgh during the years of this study. I also thought it was significant to note that my immediately previous teaching post (2003 through 2006) was at the College of Humanities of the SFSU – a non-architectural education environment – which helped to fulfil the previously stipulated requirement of strangeness. The idea was that I had been sufficiently alienated from the culture of an architectural school, which might have already as a result become somewhat strange to me, thus enabling me to more sharply observe it at a later point.


\(^{76}\) Sharon Traweek, op. cit., p.15.
The second aim was to generate original data. Overall the approach to research had been planned to be (i) qualitative: textual analysis by analysis of narrative structures and ethnography, and (ii) cross-sectional, seeking data at one point in time rather than looking in depth of time to measure change or growth. The documents that would constitute the research data would not be evaluated in terms of their correspondence to reality as true or false information but as certain representations of reality. In the thesis they would instead be analysed in terms of how they were put together and assessed. In other words, from the constructionist point of view, texts in this research would be treated not as resources of information but as topics in themselves (Prior, 2004). Overall, their analysis was intended to investigate how they functioned to produce particular effects, what elements were used for this, and what roles they played.

6.1.3 Sources of data

Up to this point in the research design, data would consist of texts and the questionnaire responses. The sources of this textual data would be various kinds of documents. They were all naturally occurring as they existed independently of the researcher’s intentions and acts. By the end of this first period of the study (approximately at the end of 2009) textual data had already been retrieved and filed in archive from the following categories of documents:

- Architectural Schools’ websites – the institutions’ self-presentsations to the world: Addressing ontological, epistemological, educational-methodological levels, these texts were also meant to function as advertisements to inform and attract new students, as well as constructing each school’s educational and academic identity.

- RIBA Validation material, particularly the schools’ own Critical Self-Appraisal and RIBA reports (covering a time range of no more than 5 years).

- RAE documents, particularly the RA5a of 2008 – the submitted schools’ self-presentations, this time to the judgment of peers. Research activity being the marker in these documents, they could be seen as marginal to the scope of this research. However, textual elements that possibly intended to draw the attention of the reader to characteristic qualities of the particular school, and linguistic choices for appropriate targeting of a public of academic peers, would be utilized as a point of reference for the

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77 In the next it will be referred to as ‘textual data’.
analysis of respective data that was addressed to simpler receptors (as is the case with the school’s webpages).

- School statements on educational policy and aims: submissions for the President’s Medals consisted of texts in which schools described their educational policy and aims, educators rationalized their nominations, judging panels explained their decision-making processes, and students articulated their statements of intent.

- Other publicized material by schools: programme handbooks, prospectuses, summer show catalogues and other published material such as assessment criteria, studio project briefs, etc.

- Statements of Intent by awarded educators: submitted for nomination for The Annie Spink Award for Excellence in Architectural Education by educators who were then rewarded for their substantial contribution to the field on a course validated by the RIBA.

- British architectural educators’ papers and presentations in two conferences on architectural education (International Conference on Architectural Education-Beijing 2007, The Oxford Conference 2008), in which the researcher participated.

- The historic RIBA Conference on Architectural Education 1958, particularly the Report of the Chairman, Sir Leslie Martin.

Particularly for the Statements of Intent for The Annie Spink Award, it should be noted that this part of textual data was seen as an important part of this research. The thesis developed a rationale indicating its usefulness on the basis that nominees in these texts stated their pedagogic choices and didactical approaches, which in turn would allow for the extraction of perceptions and traditions of teaching in architecture. However, this source became problematic at an early stage. Up to approximately the end of 2007 the Statements of Intent (later, ‘Statements of Eligibility’) of a few recently awarded educators were accessible and downloadable from the relevant RIBA web-page. I communicated through formal correspondence (firstly on October 27, 2007 and a few times later than this date) with the department of the RIBA requesting previous, unpublished statements of intend. However, in response, they indicated that this material constituted private information belonging to the nominees and the department then withdrew it from the website right away. Their suggestion was that I contacted the authors of the statements individually and requested statements of intent directly from them. None of my attempts to do so proved successful. Therefore, I
concluded that due to this change in policy, I wouldn’t be able to process the few statements of intent already downloaded for the purposes of this research.

.6.1.4 The research methods

The research method would be an analysis and interpretation of text and content drawn from documentary evidence. Identification of themes and patterns, and extraction of meanings would then inform my conclusions. The method would be an ad hoc combination of narrative analysis and ethnography. The former (narrative analysis) would provide an insight into the internal organization of the text’s story, while the latter (ethnography) would provide an indication of the relation of the story, which the document tells, to the world it is meant to circulate in. Because textual analysis depends upon very detailed data analysis, it is claimed 78 that it is essential to have a limited body of data with which to work. The total body of obtained documents, as listed above, set up the dataset. To limit this material further, a sampling was required, which in this case would be a purposive sampling: I would select texts or parts of texts based on criteria that served the objective of this research, as identified by the researcher’s judgement and prior knowledge. These would be texts by or about acknowledged educators whose teaching activity were judged to potentially reveal institutionally accepted criteria. Additionally, this sample would include texts by people actively involved in research and publishing on the subject of architectural education and texts by educators who were proponents of, or clearly engaged with, a concrete theoretical stance. Clear criteria would be further developed to defend the choice of purposive sampling for the said data selection.

.6.2 The research approach of the final stage

Within the research approach described in the previous section, it was an inherent premise that pedagogic knowledge in architectural education circulates in written form, while the purely didactical knowledge (of how and what) is transmitted orally. This premise has certain implications in terms of the appropriate methodology design: certain forms of observing, monitoring and interpreting are, as a result, more appropriate than others.

The initial research design for the thesis aimed at applying similar methods of research. It was congruent with an approach to architectural education issues that revolved around the

pedagogical plane, providing little connection with the phenomena of the teaching *praxis* (of *how* and *what*) and the learning *experience*.

On the other hand, as a review of relevant literature indicated, previous scientific and disciplined inquiry – involving qualitative, ethnographic and quantitative methods – had been extensively pursued for investigating architectural education until recently, especially for topics such as the design studio and the live project, which this thesis intends to explore as well. This approach has already given rise to important descriptive data.

I, the researcher, decided that this study would transcend the need to monitor, observe and record educational settings in architectural education, taking into consideration that previous research undertaken by other researchers had sufficiently done exactly that. This should by no means be perceived as a call for the end of undertaking similar field-based research work. Rather, the point is that for the purposes of this particular thesis suitable descriptive data was already available from previous scientific and disciplined inquiry. Therefore, by making use of the descriptive data generated by preceding relevant research, the present thesis would direct its efforts and focus towards discussing ways of associating pedagogy with didactics, to the benefit of architectural education. At the same time it would propose an alternative reading and interpretation of the descriptive data, at the level of didactics, thus contributing to the development of these issues in relation to architecture specifically.

Despite the preparatory steps (especially for the field work) that had been taken in line with the initial design approach, during the course of this study, but primarily during the years of interruption of the study, I came to believe that the research approach would have to be readjusted.

It then became clearer that the field was in fact over-saturated in certain areas. Firstly, I observed that the field did not need another empirical, ethnographic piece of research which, based on the production of original data, would announce findings and extract original conclusions to offer new knowledge. Secondly, I observed that field was not missing a process of answering research questions by asking educators and/or students *what they do* (to codify and conduct anew a good-practice guide), nor or by asking *what are the things that go wrong in architectural education* (using interviews, questionnaires, case studies, etc.) to identify variables in the answers, then quantify and establish relationships among them to come to conclusions.

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79 Themes such as: values embedded the current canon of architecture and in the model of knowledge transmission, norms and perceptions, relations and power issues in the educational setting, the relative position of teacher-student, teachers’ perceptions of their students as learning subjects etc.
What could be seen as saturation in a certain research trend of the field of architectural education, along with two more factors which will be outlined below, finally prevented this research from proceeding on the initially intended path. I thus aimed to avoid taking a similar approach to those previously described.

The first factor was a potential criticism vis-à-vis the limitations and weaknesses of the research design that the extensive use of such methods could have provoked. Another piece of empirical research on architectural education that might be seen as inward-looking, self-referential and lacking solid guidance from theory or reliable contribution to a theory, would, most likely, fail to bring anything new to the field. Further, the validity of originally produced data, which has been soft anyway, in addition to having been produced by researchers who were often themselves participants in the setting under research (i.e. by being both the tutor-instructor and the researcher) could be questioned. Moreover, due to sampling method and size, the reproducibility of the conclusions could always be challenged and, as a result, the generalizability of the results.

The second factor that prevented this research from echoing previously followed approaches was the researcher’s earlier acquired theoretical background in the area of non-cognitive, educational theories and philosophy (i.e. critical and post-modern, post-structuralist, post-colonial pedagogies). This background could have oriented the research towards the perspective of pedagogy, however in this case the motivation for this particular thesis was not the acquired familiarity with this field of enquiry. Had this been the case, it would have made manifest a deficit in the capacity to fill the gap in the matter of architectural didactics.

Conversely, the relative familiarity with this theoretical background initially stimulated and later shaped the question, which ultimately motivated this research: how could we situate in the context of broad philosophical questions, which usually scaffold the discourse of architectural education, the enquiry into ways of investigating better teaching and learning architecture?

Within the genealogy of non-cognitive, post-modern educational theories it is common place that the world under investigation is not uniform and coherent, that it cannot be wholly understood and generalized about by scientific examination, that truth is not absolute and universal, that difference and otherness, in regards to human existence, are respected (that individual and minority voices are accepted), that specific issues are better viewed through specific lenses, etc.

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80 In the framework of the pursued study for a Master’s degree in Education, at the San Francisco State University (2003-2005).
As a result, the author’s stance towards this research would deviate from one in which the researcher seeks for a pre-existing, objective truth, which he would draw by use of methods from the positivist paradigm. Rather, in the framework of this study the author perceived truth as concerning a fluid field, not dominating, but left open to multiple possibilities and the flow of logic, to contribute to a more comprehensive understanding of teaching and learning in architecture from a different standpoint.

### 6.2.1 The methodology

A combination of two methods of enquiry is employed in this thesis: one is argumentative analysis and the other is philosophical explanation.

The first method, a dialogic approach towards externally established theses and anti-theses, is utilised on two exemplary cases of public discussion about architectural education, selected by the author. They are selected as examples of a subcategory of the broader discussion, which in this thesis is described as ‘discussion at the extremes’.

The reasoning behind the selection of the two cases is analogous to that of the process of purposive sampling in a qualitative or mixed-methods research design. Similarly to purposive sample, it is down to the judgement of the researcher to select two examples of the discussion at the extremes to be studied for the best possible outcome. In contrast to probability-sampling, the goal here was not to select randomly from a population (in our case, from a larger number of discussions) with the objective to make (statistical) generalisations from that sample. The main purpose of this selection was to focus on the specific characteristics of the discourse, which were of interest to this thesis and would be best suited to address the research questions. Some authors suggest that in this type of sampling, the non-representative property of the sample is not considered a weakness for researchers. Hence, the size of the sample in purposive sampling is very small, compared to probability sampling, and this is the reason why this part of the thesis deals with just two cases of the public discussion.

The two cases of discussion about architectural education, which present unusual, paradoxical, or ‘extreme’ arguments and positions, I consider as constituting instances of a discussion at the extremes. As such, I claim that focusing on these discussions will provide significant insight into the phenomenon of architectural education, highlighting remarkable arguments and positions, perspectives and viewpoints. In this sense, the selected cases have

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81 Recorded and transcribed to be treated as a text.
82 The selection is analogous to the purposive sampling, the type of non-probability sampling, which is based on the judgment of the researcher.
83 In the research methods bibliography an alternative terminology is ‘judgement sampling’.
84 Gay and Airasian, op. cit., pp.138-140.
been deemed useful in that they can enable logical interpretations of the phenomena under study. In addition, I claim that the same cases can prove decisive in the exploratory research of the phenomenon under study, to allow for a logically generalizable explanation.\(^85\)

The first case of discussion is the Oxford Union Debate of 2008,\(^86\) which had the motion: ‘Architecture would be better off without Schools of Architecture’. The case is selected as extreme; that is, the apparent universal appeal of its dilemma is formulated in extreme terms and the discussion concerns formal architectural education and the possibility (even rhetorically) of its abolition.

The second example is the proposal of Alexander Tzonis,\(^87\) which concerns the establishment in architectural education of architecture’s ‘teaching hospital’. Tzonis made use of this global metaphor from medical education to suggest that architecture needs an institutionalised educational practice. The case is selected as deviant from the long established conception – since Donald Schön – that architectural education is the paradigm for all professional education, including medical. In this case, the norm of the discussions is subverted as it is suggested that architectural education would benefit from the paradigm of medical education. This proposition is characterized by its directness in targeting the essential dilemmas in the broader discussion about architectural education.

Both cases of the *discussion at the extremes* are associated with theoretical and philosophical positions drawn from the field of educational theory, to suggest that architectural education is in need of stronger connections with this area.

As each one of the cases is analysed and arguments are discussed and amplified, a sequence of fundamental questions develops.\(^88\) Generally, these questions express the dilemma of whether the learner of architecture performs better relying on the inner creative self or in communion with others. This discussion results in the utterance of more dilemmas and in the production of further dichotomies. It also suggests that the enquiry surrounding architectural didactics ultimately requires an exhaustive discussion of these dilemmas and dichotomies.

\(^85\) These are the characteristics that two types of purposive sampling combined would seek to fulfill; the types are extreme (or deviant) case sampling and the other is critical case sampling.

\(^86\) The debate took place on Monday 21 July 2008, 20:00-22:00 local time, on the sidelines of the Oxford Conference 2008, on architectural education, commemorating the historical Oxford Conference of 1958.

\(^87\) Alexander Tzonis is Professor emeritus of Architectural Theory at the Delft University of Technology in the Netherlands and Director of the AKS-AIIA (Design Knowledge Systems) research group on architectural cognition. This was his keynote lecture, in the International Conference on Architectural Education, CAFA, Beijing 2007.

\(^88\) By this, I mean questions of a philosophical rather than scientific character: as they are not about truth, they may not lead to practical, terminal answers. Hence, their exploration makes them more useful than their potential answers.
The second method is used to formulate the questions to be explored, and suggests philosophical problems surrounding architectural education. Possible approaches could be the elaboration on an analysis or on a definition, or even the enunciation of a theory. In the case of this thesis the method consists of proposing a non-causal, philosophical explanation of how two different and apparently antithetic views can be held at the same time, consistently. The philosophical explanation is the kind of solution to a philosophical problem that does not consist of definitions or generalisations.

Both processes, while they appear to be self-evident aspects of the problem, aim at the revelation of key themes of architectural education for discussion, as well as at the emergence of a number of fundamental questions, essential to the present enquiry. Hence, themes like ‘reality’ and ‘real’ and fundamental questions such as ‘learning in Republic or in Solitude?’ are crucial to this part of the thesis.

During analysis, the theoretical-philosophical positions and concepts, presented in the texts of educational theory, are amplified and subsequently contextualized in the discussion on architectural education. The objective is to reframe and re-construct the discussion at the extremes (projected in the two cases) in precise terms of educational theories. This process results, at first, in the emergence of certain themes. The approach is then extended to the comparative description and analysis of the studio and the live project.

It is in this way that the enquiry shifts from questions of a pedagogical nature to questions addressing the didactics of architecture.

The approach, instead of focusing on just one part of the antithesis, or on only shedding light on the divergence, reveals co-articulation and mutual encounter.

Moreover, the thesis aims at responding to questions dialectically, as much as it intends to offer an alternative reading of architecture’s two didactic tools through the lenses of educational philosophy (pedagogy). As has been mentioned previously, the thesis draws on descriptive data about the two didactic tools from appropriate existing research work. Basic sources of such data include the following:

(i) texts about the design studio of architectural education by D. Schön,
(ii) the PhD dissertation ‘Architectural concept formation: transmission of knowledge in the design studio in relation to teaching methods’ by N. Marda.

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89Idem.
80A version of definition of the term is available in: http://en.wikipedia.org/wiki/Philosophical_methodology
81Themes such as ‘reality’ and the ‘real’ in the contemporary architectural education discourse, the role of the teacher and the teacher-student relationship, as well as debating modes of learning and the purpose of higher (architectural) education.
(iii) the PhD dissertation ‘Between studio and street: the role of live project in architectural education’ by R. Sara,\textsuperscript{94} and

(iv) the PhD dissertation ‘A critique of the live project in architectural education’ by B. Brown.\textsuperscript{95}

In the process of generating a theoretical grounding for the two didactic tools, the thesis retraces the function of each through the prisms of pragmatism and phenomenology in reference to key-concepts of the educational relationship such as ‘reality’, ‘real world’, ‘experience’, ‘apprenticeship’, and ‘meaning’.

\textsuperscript{93} Marda, N. (1996) Architectural concept formation: transmission of knowledge in the design studio in relation to teaching methods. Thesis (PhD), Bartlett School, Faculty of the Built Environment, University of London.

\textsuperscript{94} Rachel Sara, Between Studio and Street: the role of the live project in architectural education. Thesis (PhD), University of Sheffield, 2004.

\textsuperscript{95} Benedict Brown, A critique of the live project in architectural education, Thesis (PhD), School of Planning, Architecture &Civil Engineering, Queen’s University Belfast, 2012.
Chapter 1
The Discussion at the Extremes as meta-discussion

There is not really very much to be gained from asking how many kilometres is the moon from earth, or which is the formula for making hydrochloric acid. We know definitely the answers to such questions, and the definite character of this knowledge, according to Heidegger, reveals how in-essential or, at least small, was the original question. Conversely, what is worthy of questioning is literally inexhaustible. There are no terminal, finite answers to the question of the meaning of human existence, or of a Mozart sonata, or of the conflict between individual conscience and social constraint. The ‘worthy of questioning’ (Fragwürdige) dignifies the question and the questioner by making of the process of interrogation and response an ever-renewed dialogue and counterpoint. But even if there can be no end to genuine questioning, the process is not aimless. The wandering, says Heidegger, the peregrination towards what is worthy of being questioned, is not adventure but homecoming. Man, in his dignity, comes home to the unanswerable.


Extremes and rationality
Questions of the unanswerable kind
Case study 1: Do we need schools of architecture?
Case study 2: A teaching hospital for architecture
1.1 Extremes and rationality

Recent discussions regarding architectural education do not appear to be practical in character. Yet, it might be the case that in such discussions there are hidden questions ‘worth asking’, in the sense that they may not lead to practical, terminal answers, but nonetheless stimulate productive reflection. What’s more, these kinds of questions have the potential to take us on a fascinating journey – ‘the long journey towards what is’. In this chapter, I resituate the focus of discussions about architectural education, which present unusual, paradoxical, or ‘extreme’ arguments and positions, and which, as I see it, constitute instances of discussion at the extremes, in order to extract from them questions ‘worth asking’. Firstly, I intend to discuss and amplify arguments and positions deployed in discussion at the extremes, which generate certain theoretical problems. Once these have been identified, I will then (in chapters four and five), associate these problems with theoretical questions treated in relevant (and often, interrelated) texts in educational theory, in the absence of which discussion at the extremes currently takes place. Thus, connections between discussion at the extremes and educational theory will be revealed.

One question that needs addressing is what the term ‘extreme(s)’ means in this particular context. What could we be aiming at by using the word here? Lexical definitions range from denotative to connotative meanings. Some of the most common definitions for the noun are: 96 (i) the greatest or utmost degree or point, (ii) either of the two things situated at opposite ends of a range, e.g. ‘the extremes of boiling and freezing’, (iii) the first or last term of a ratio or a series, and a maximum or minimum value of a function (Mathematics), and (iv) the major or minor term of a syllogism (Logic). For the adjective are: (i) the most remote in any direction; the outermost or farthest, e.g. ‘the extreme edge of the field’, (ii) extending far beyond the norm, e.g. ‘an extreme conservative’, and (iii) final or last (Archaic). It is clear that connotative meanings are generally negative, 97 e.g. the unreasonable, the unacceptable, the quasi-abnormal.

Western culture, for many centuries, seems to have retained the essence of Aristotle’s ethical approach, valuing moderation over extremes of any kind. Aristotle deals with the

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97 Cambridge online dictionary. Under the category ‘beliefs’, the adjective ‘extreme’ is defined as follows: ‘describes beliefs and political parties which most people consider unreasonable and unacceptable’ examples: (i) ‘he has rather extreme views’, and (ii) ‘he’s on the extreme right-wing of the party’. Available from: http://dictionary.cambridge.org/dictionary/british/extreme_3 [Retrieved 21.07.2010]
The Oxford online dictionary, for the same entry, under the category ‘of a person or their opinions provides the definition: ‘far from moderate, especially politically’. Example: ‘groups of his more extreme supporters rioted in front of parliament’. Also in the same: denoting or relating to a sport performed in a hazardous environment and involving great risk, such as white-water rafting.
notion of extremes in two instances. First, in his philosophy of nature (Physics), where he sees the universe as a range extending between two extremes: immaterial form, and formless matter. Secondly, in his moral philosophy (Ethics), where he puts at the core of his account of moral virtue his doctrine of the mean (μεσότης). According to this doctrine, moral virtues are desire-regulating traits which are at a mean between different kinds of more extreme traits (or vices): e.g. courage lies between cowardice and rashness. Rather than being a mathematical mean, μεσότης (moderation) is rationally determined, based on the relative merits of the situation. That is, it is ‘as a prudent man would determine it.’ Aristotle concludes that the difficulty of living the virtuous life lies primarily in the difficulty of achieving a mean between the extremes.

Since Aristotle, when we refer to ‘extremes’ we usually imply oppositional extremes. This view brings into being an illustration of balance between extreme positions, a metaphor of a ‘swing’ from one point to another. The idea of opposing binaries is inherent in the common understanding of extremes and, as cognitive anthropology asserts, the tendency of the human mind to think in dualities has expressed itself in the symbolism of every culture. One of the three (or four) basic concepts of Fichtean / Hegelian Dialectics asserts that everything is made up of contrasting forces (contradictions). A more generalised and systematic attempt to oppose this tendency only appeared in intellectual thought in the early and late twentieth century, which pays particular attention to extremes. In literature, for example, significant authors have invented extreme forms of narration, precisely in order to transgress fundamental and theoretical approaches. Almost any radical, experimental, modernist writer of the early twentieth century in the UK, such as Ezra Pound, T. S. Eliot, and Virginia Woolf, used extreme narrative forms to challenge the limits of the knowable, whether in poetry or prose.

An alternative approach, possibly in line with the archaic definition of the extreme as final and last, comes from Milan Kundera, who suggests that extremes play the role of revealing the frontiers beyond which life is extinguished. He argues that passion for the extreme, in art or in politics, is a hidden aspiration for death. Whether or not this appears as an ‘extremist’ definition is not our subject here. On the other hand, including architecture

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100 Brian Richardson, Unnatural voices: extreme narration in modern and contemporary fiction, Columbus: Ohio State University Press, 2006, p. ix.
101 Brian McHale, Postmodernist Fiction, London; New York: Routledge, 1989. In an analysis of modernism, the author talks about modernism first in epistemological terms and argues that modernist literature collectively asks a number of questions including: ‘what are the limits of knowledge’ and of ‘the knowable’ by inventing extreme narrative forms.
in his category of art (‘in the art or politics’) might raise the question: what would a respective passion for extremes in architecture reveal? Moreover, the premise that teaching architecture is an art (in the way that teaching is purported to be by many theorists of education), would lead us to ask: what does dealing with extremes mean for architectural education, or at least for the discussion surrounding it? And further: under what presuppositions could it become a fruitful endeavour? Also: how is the art of teaching architecture related to contemporary educational theories? In attempting to answer such questions, this study develops the argument that architectural education lacks foundations in contemporary educational theories.

Then again, since it has been a tendency of twentieth century art to challenge extremes, architecture ought not to be excluded from discussions surrounding them. Architects, like authors, have been inventing extreme forms not only of expression but also of thinking. To a certain extent this effort can be identified with a search for novelty, originality and impact – to a striving to push the extremes of their (architectural) knowledge beyond the norms. But is this continuous effort (which consistently encounters new problems and new solutions) congruent with the problem-based educational approach in architecture? To what extent has this mentality resulted in crystallizing the idea that everything worthy (in education and in design) comes from the future rather than from the past (from experience, for example)?

While one cannot deny the importance of progress, it would be useful to point out the monotonous, unidirectional and unbalanced appeal of the ‘new’ in architectural education, to the extent that it relates to an endeavour towards the extreme. Is, hence, discussion at the extremes a sought-after source of ideas and innovation that might resolve (constantly arising) design problems, a source of (necessarily new) solutions that are expected from the future and which are attractive just by virtue of being new and untried?

In another instance, Kundera advocates the idea that playing with extremes is a way of making life interesting and even meaningful because life can only find meaning by being ‘played with’. In that vein, challenging extremes means constantly creating new existential adventures. In these terms, one could re-state the question: what is the purpose of

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103 Amos Rapoport, Architectural Education: There is an urgent need to reduce or eliminate the dominance of the studio, Architectural Record, 172:10, 1984, pp. 100-103. Rapoport has criticised the studio-based approach to architectural education as highly arbitrary: architectural education remains a ‘trial and error’ enterprise.

104 Brian McHale, loc. cit.

105 Of relevance is the criticism that is developed by Hannah Arendt in her essay ‘The Crisis in Education’ of 1956, on the same concept, which she justifies by the instrumental role that the American politics, since the eighteenth century, reserved for education and which is made manifest in the American enthusiasm for ‘what is new’.

challenging extremes in architecture, what is the purpose of embarking on new existential adventures (created for learning purposes) in architecture?

1.2 Questions of the unanswerable kind

In this chapter the term ‘extreme’, in discussion at the extremes, is dissociated from any negative connotations, in the interest of the analysis at hand. After all, extremes provide us with a means to test limits, and question possibilities that, as yet, remain unknown and uncharted. They likewise provide the opportunity to explore arguments, shed light on the more hidden aspects of a case, provoke stimulate thinking, and even allow us to play the role of devil’s advocate in various discussions.

What’s more, having an idea of what is at the extremes can give a sense of where the centre lies: in this way, extremes allow us to see the ‘centre’ from a unique perspective. Accordingly, by referring to an extreme we have indirectly defined the norm from which it deviates. While something may be an extreme in a certain context, in another it may not. In this way, we can grasp the relative character of the centre and the temporariness of norms - that is, the contingent nature of the dominant values and beliefs that, objectified, constitute the norm at that point in time. It is in this sense that I perceive the response to discussion at the extremes on architectural education as a form of reasoning, based on the development of arguments and counter-arguments, advocating theses (propositions) and antitheses (counter-propositions). Moreover, I see it as a means of clarifying the landscape of inquiry via the emergence of fundamental questions, rather than as a way of generating definite answers. If one had to select between either one of the extremes, then one would lose the advantages of a dialectical synthesis of the opposing assertions, which allows for a deeper and more complete understanding of a complex reality. I suggest that it would be dangerous to engage with either one of the extremes unconditionally and without having made an attempt at synthesis, even when the dividing line between right and wrong is at that moment quite clear.

As discussion at the extremes is mostly useful for setting up ‘unanswerable’ questions, when it comes to answers, the richness and importance of the discussion is derived from the potential fusion of the extreme positions; from their unceasing, and yet nonetheless productive, competition and, finally, from shedding light from either one towards the other. The importance of discussion at the extremes lies in its usefulness as the starting point for meta-discussion: it is not the discussion per se (with its extreme and oppositional arguments) that is significant in terms of the cause of education, but the discussion of discussion at the extremes; of its content and structure. Quite possibly, this meta-discussion will allow for the essential elements of education to emerge – its potential to broaden the perspectives of the
recipient of education, cultivate the intellect by widening the horizons of perception, equip one with the critical capacity for distinguishing between the need to subvert and the need to conserve. Therefore, I claim that the discussion of every discussion at the extremes has this unique function to fulfil.

Over time, architectural education has been preoccupied by polarizing questions, which we can consider as having evolved into discussions at the extremes. Sometimes these have developed as overt ones, including: ‘theory-oriented or practice-oriented architectural education?’, ‘is architecture teachable as a science or as an art?’, ‘education in the service of the market economy or of society?’, and also ‘studio or live project?’ etc. Oftentimes these questions are reducible to others that appear covert, but which are likely to be equally polarizing. For instance: ‘towards architecture of need or architecture of desire?’, ‘a modernist or a postmodernist educational approach to architecture?’, ‘architecture as a personal endeavour of the architect or as having an absolute responsibility towards the collective?’, and ultimately ‘architecture better learnt in Republic or in Solitude?’

The following part of the chapter presents two cases of public discussion about architectural education, presented by the author as examples of a discussion at the extremes. Both present unusual, paradoxical or ‘extreme’ arguments and positions. For this reason, they are useful insofar as they will enable logical interpretations of the educational phenomena under study. The methodological reasoning for their selection is presented in the Introduction (section 6.2.1). The two cases are approached dialogically, as analysis and discussion and will make clear their overt theses and antitheses to reveal inadvertent associations with educational theories. The process identifies the positions and arguments deployed in each case and, subsequently, the implied theoretical problems.

I will discuss the connections that can be drawn between these problems and the theoretical questions addressed in relevant texts from educational theory in the following chapters four and five. The concepts and theoretical-philosophical positions present in these texts will be assessed and subsequently contextualized in the discussion on architectural education, with the intention being to reframe (re-construct) discussion at the extremes as the non-intentional expression of these theories. The process of connecting discussion at the extremes of architectural education with educational theories results in the emergence of themes which will be addressed in the following part of the thesis.

107 More about the choice of this wording and how it codifies the original question (of learning either under the influence of the reflective context or of the inner, creative self) is discussed in chapter 5, section 5.1.

108 Themes such as the notions of ‘reality’ and the ‘real’, the role of the teacher and the teacher-student relationship, debating modes of learning, and the purpose of (higher) architectural education.
1.3 Case study I: Do we need schools of architecture?

The first example of discussion at the extremes, that I present in order to initiate reflection on the issue, is the 2008 Oxford Union Debate. The debate took place alongside the Oxford Conference 2008 ‘50 Years On: Resetting the Agenda on Architectural Education’, in commemoration of the first, historical Oxford Conference on architectural education in 1958.

The motion of the debate was: ‘Architecture would be better off without Schools of Architecture’. This presents an extreme dilemma, yet one with universal appeal, formulated in extreme terms: a discussion concerning the (even rhetorical) possibility of the abolition of formal architectural education. The debate ended with a traditional exit poll (voters were the participant audience, which consisted of academics, architectural educators, students and professional architects) to provide a conclusive, albeit symbolic, result.

The motion, echoing a critical question about where architecture would be better taught and learnt, either in schools of architecture or in architectural offices, actually lead to questions about how it might be better taught and learnt, while the initial question essentially remained unanswered. Therefore, the discussion about where clearly has a cognitive dimension. In fact, the topic of situatedness has extensively preoccupied cognitive science, particularly since the 1980’s. However, as far back as the 1920’s, Lev Vygotsky introduced the idea that the behaviour and cognition of a knowing subject are affected by a close relationship between the subject and its environment. On the other hand, the value of the unanswerable-ness of its questions is not ignored by this thesis. It is through deliberations around such questions, I believe, that the landscape may become clearer and questions may be set in a new light.

In short, the form of the debate made it an instance of dry, pre-constructed dialogue, with arguments having been prepared by the debaters before-hand, thereby eliminating the possibility of a live dialogic process that would conclude with an in situ synthesis of the extreme positions into alternative propositions, i.e. of how architecture could be taught differently, alternatives to studio teaching, etc. Although the Oxford Union Debate has not been the only occasion for such a discussion, it is a paradigm of how discussions about architectural education develop and conclude.

109 The 2nd Oxford Conference was held in Oxford University from 21 to 23 of July 2008. It commemorated the 1st Oxford Conference of 1958 that took place 50 years earlier. The original conference was chaired by Leslie Martin and participated in by 50 academics from the UK. That conference focused on architectural curricula, on the transfer of architectural education into universities, and on studio teaching. The 2nd Conference was attended by over 500 persons, mainly academics from all continents, but also students, graduate researchers and professional architects. I participated the conference with a paper on ‘Prolegomena to a Special Didactics for Architecture’. The website of the event: http://www.oxfordconference2008.co.uk/
During the debate, the discussion appeared polarized between the professional and the academic (educational) fronts. A substantial part of the discussion revolved around the role of architecture’s education and its relationship with the realm of professional practice and, by extension, with the extra-academic world – in other words, what was referred to as the ‘external world’ in the discussion. On the one hand, academics defended the validity of the university-based architectural school, which ought to be kept independent of the demands of practice, and more generally, of the marketplace. On the other hand, representatives of the realm of professional practice – of the ‘outside world’ – argued for the insufficiency of schools in assuming their role as reproducers of the profession, and partially suggested the domain of practice as an alternative. This side of the debate criticised architectural school by building on the argument that the university is a social institution and for this reason must be held accountable to society. This view suggests that architectural schools should pay close attention to and serve the needs of professional practice. Hence, architectural curricula, contents and methods all ought to comply with the ever-changing conditions of the ‘real world’ of practice. The claim was that architectural schools do not follow changes that take place in the profession, the industry and the marketplace. From this perspective, architectural schools were criticized for just maintaining the status quo, for not producing new knowledge and essentially for being identified with conservatism and stasis.

Alternatively, academics, against the motion, defended the validity of the university-based architectural school, which ought to be kept independent of the demands of practice, and more generally, of the marketplace. According to this line of thought, the university, by its very nature, ought to provide freedom and space to the academic community for quasi disinterested experimentation and creativity. Thanks to this freedom from the demands of practice, new knowledge and characteristic developments in recent architecture have been generated in schools rather than in the realm of practice. Examples of such developments, are, among others, the CAD (Computer Aided Design) and the more recent Sustainable Design. Very graphically, Peter Cook in his conclusion to the debate drew the dividing line between the university and the world of practice:

School is where you can expose the passion of partisanship and involvement. The outside world is where you keep your head down\textsuperscript{110}

It is fair to assume that among the fundamental perceptions of this side is that the university ought to be identified with progress at the cognitive level, and with progressivism at the ideological level.

\textsuperscript{110} Sir Peter Cook, in the 2008 Oxford Union Debate. See Appendix 1: Peter Cook Opposition, [13:36/34:41].
In Britain, the relationship between architectural education and professional practice has been brought into question since the widespread introduction of architectural education into universities, as early as in the mid-twentieth century. The educational realm has since gained relative autonomy, becoming part of the academe. Architectural educators have been able to lead careers independently of the production of architecture in the professional practice, based out of architectural schools.

With increasingly distinct roles vis-à-vis architecture, the fields of education and of practice have often seen their relations become tense which has been reflected in discussions surrounding their relationship. This is a known phenomenon in the U.S., too, where similar discussions have been described by architectural educators as ‘taking the form of a jeremiad, of a prolonged lamentation or complaint’. One characteristic moment in this trajectory, referred to by various authors such as Haar, Fisher and Solomon, was the publication in the 1990’s of two opposing debating articles. The first was ‘The Schools: how they are failing the profession’ by Michael J. Crosbie in Progressive Architecture magazine. The response came by Reed Kroloff with ‘How the profession is failing the schools’, published in Architecture magazine. Following a similar pattern with what was observed in the Oxford Union debate, the arguments of each side, of education and the profession, were built upon the deficiencies of the other, as if the two spheres were isolated rather than symbiotic – albeit, competing – worlds.

To give an idea how the two spheres, despite the tension, are connected, Solomon referred to Princeton sociologist Robert Gutman, who has found that one quarter of U.S. architectural educators (including academics, adjunct and lecturers) have significant involvement in practice. More findings by the same researcher stated that, as another indication of the covert interconnectedness between education and practice, the most important new design tendencies in practice have their origins in the work of architects at a time when they were involved in architectural education; that is, teaching in schools. If this pattern is accurate, it suggests that the case may not be much different in British architecture schools.

114 Reed Kroloff, How the Profession is Failing the Schools, Architecture 85, (August 1996), 94-95.
116 The effect of the act of teaching on cognition and creativity is discussed in chapter 5 (section 5.6.2).
Indeed, while the two worlds are ‘two parts of a historical couplet’\textsuperscript{117} there is a tendency to further connect education and practice in a common topos where learning will supposedly take place more effectively. The aim is to increase learning that results in qualifications that will be useful later in professional practice. The current situation is that professional practice receives pressures from the market economy through increasingly changing labour division (new competing specializations within the building industry follow technological progress and new materials, etc.), which is then projected onto education. This is based on the assumption that the sphere of education is supposed to serve professional practice as well as the overall spirit of the market economy. But presenting the field of education as benefiting from its connection with the profession is only one side of the coin. Of course, the discussion of the two opposite views has roots in the past, and will certainly continue in the future. But I would like to explore how these views have developed in order to understand the extent to which they are relevant to the issue of architectural education.

For European, and to a certain extent, North American higher education, the 1968 university students’ uprising events became a turning point for ways of conceiving education, especially at the level of discussion about the university and its roles in society and in the broader world. Overtime, a certain perception developed among academics about the university, which holds that it can operate only if it maintains its independence from conditions externally imposed upon it. In other words, the university cannot have any external τέλος (telos = purpose, end) imposed upon it, otherwise it is not truly a university. In accordance with this reasoning, the university – as Kant would have put it – is structured around the concept of rational reason. Moreover, Adorno might have suggested that the university should evolve in accordance with the current (at any one time) dialectics of rational reason, particularly when rational reason becomes instrumental. What happens, in this case, to the university? What is the purpose of its very existence? In the Oxford Union Debate, representing the side of the academics, Jeremy Till went into more detail in his conclusion to the debate:

If simply you are bound up within the instrumental demands of practice, then I would say yes, schools should be shut down… But if schools are going to be somewhere, which would allow to think and criticize outside the instrumental demands of the marketplace, then they have a valid and important role to play\textsuperscript{118}

A university School of architecture, independent of the instrumental demands of the marketplace, as Till put it, embodies the constant search for autonomy of the modern, post-

\textsuperscript{117} Nancy Solomon, loc. cit.
\textsuperscript{118} See Appendix 1: Jeremy Till, Conclusion, [27:17/34:41].
enlightenment, secularized, scientific, research university – in the sense of academic freedom or independence from any other power (historically, the first having been the oppressive forces of Christianity). In light of such claims, I suggest that the discussion on architectural education, as it unfolds in the Oxford Union Debate – and, in particular, the arguments put forward by those opposing the motion (such as Jeremy Till and Sir Peter Cook) - reflects Derrida’s conception of the ‘unconditional university’. The university, as Derrida construes it, is an idealistic place (or public institution) where free, unconditional thinking takes place – the kind of thinking that is free of limitations or presuppositions. Discussing sovereignty, sovereign mastery and the cruelty it authorizes, Derrida identified the ‘unconditional university’ as a site of possible resistance to sovereignty. More specifically, the university, idealistically, need not abide by any overriding principles, except the principle of truth. It is the place where the power of truth to unconditionally resist external powers is professed:

Such unconditional resistance opposes the university to a number of powers, for instance, to state powers, to the powers of the nation-state, and to its phantasm of indivisible sovereignty – the truth of sovereignty, or sovereign mastery, is declared a ‘phantasm’ in the university. It also opposes it to economic powers (to corporations and the national and international capital), to the powers of media, ideological, religious and cultural powers, and so forth – in short, to all powers that limit democracy to come.

Unconditional resistance indicates how the university might hope to be not just cosmopolitan but universal, extending beyond world-wide citizenship and the nation-state in general. The work of the university, like operations of resistance and dissidence, involves the unconditional independence of thought, of deconstruction, of justice, of the Humanities, of the University, etc. The university ‘resists, deconstructs, resists by deconstructing the phantasm of the indivisible border’. After all, the university is less a (geographical) place but rather a world unto itself. Derrida stresses the distinction between the work of the university and the operation of the phantasm of sovereign mastery: the principle of sovereignty and hence, the principle of power is alien to the university.

The connotations of an ‘unconditioned’ university are worth reflecting on: as Derrida suggests, it might also be construed as a ‘powerless’ and even ‘defenceless’ university. For the same reasons that the university is independent of sovereign principles, it is also

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119 ‘L’ université sans condition’ was the title of a lecture that Derrida gave first at Stanford University on April, 1998, then repeated in Athens, on June 1999 and, a year later, in Frankfurt after an invitation of J. Habermas. The lecture, inscribed in the European continental philosophical (particularly of the German: Kant, Schelling, Humboldt, Fichte, Nietzsche, Heidegger) tradition, investigates what goes into organising a university; i.e. the judiciary, ethico-political and economic conditions that determine academic teaching and research.

vulnerable and exposed. In essence, its disinterested efforts for truth are continuously under threat of being appropriated by external interests. Thus, freed of any external influence, the university is all the while powerless.

This line of argument appears, at bottom, to question the very meaning of higher education amongst the institutions of society. In the debate, those opposing the motion (primarily academics) made evident a concern that since the end of the twentieth, and particularly at the beginning of the twenty-first century, the university has received constant pressure to become more connected to the imperatives of the marketplace – and, in turn, more related to the fiscal economy than to a Newtonian anthropology. At this point of the discussion it is necessary to mention that the proponents of the motion challenged the concept of the ‘unconditional’ suggesting the need to consider a requirement of accountability that the university ought to comply with. Focusing on the measurable and material aspects of the relationship between the university and other societal institutions, this reasoning appears primarily to be based on the fact that the public university is supported financially by society when funding comes from the state. Therefore, the university – and thus the architectural school – ought to produce knowledge and information with a certain type of relationship in mind, analogous to the one that producers tend to develop with consumers, and further, to be assessed and measured with concrete measures of efficiency and, perhaps, applicability to society itself.

It should be mentioned, however, that from the arguments of the academics in the discussion, the impression was that ‘unconditional’ was not intended to be construed as ‘unaccountable’, in relation to the operations of the architectural schools (i.e. at the management of public resources). Rather it seemed that they were in fact using ‘unconditional’ in reference to the level of educational priorities, strategies and tactics: the pedagogies, and didactics (the curriculum, the content and the modes of teaching) – all of

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121 There is an underlying difference here between liberal education in the sense of Παιδεία (Bildung) and education in the spirit of native pragmatism as a professional formation. The main characteristic of the former is that the objectives remain undefined (disinterested process) and there is no attempt to achieve practical, pragmatist operationalisable professional qualifications. The latter, presupposes the operationalisability of the subjects to be studied, as well as the control of the educational process in the measurable terms of efficiency and results. Professionalisation is the dominant tendency in the education of social professions, and this can be justified by the idea that educated professionals will affect society by their professional activity and actions – therefore, those parts who control society also want to control the professions, hence their education. This kind of education (not liberal) is no longer an individual’s personal endeavour or the result of personal motivation for passionate study of the world, but a collective and controlled one: ‘the instrumental demands of practice’ that Jeremy Till emphasises.

122 Jean-François Lyotard, in defining postmodernism as the condition of ‘incredulity toward metanarratives’, uses the metaphor of a ‘Newtonian anthropology’ to refer to the society before change: ‘where a society of the future falls less within the province of a Newtonian anthropology (such as structuralism or systems theory) than a pragmatics of language particles’. In: Jean-François Lyotard, *The postmodern condition: a report on knowledge*, Manchester: Manchester University Press, 1984, p. xxiv and p.110.
which would secure the best conditions for enabling the university’s professed objective, which is to attain ‘truth’. It is in this sense that, as Derrida would have put it, the Architectural School should take up its responsibility to discuss and develop a ‘new architectural thinking’, one that would require that architecture operates in a state of constant reflectiveness. Moreover, Derrida would have suggested that Architectural School should be required to inform society about the reasons for choices in architecture, vis-à-vis the human needs and those of society (or, of which sections of society), the environment and the use of technology. In other words, though Architectural School is ‘unconditional’ it is nonetheless committed to making clear what architecture is and who it benefits, who it resists (and why); thus, educating not just on a cosmopolitan level but on a global level.

Those arguing from the point of view of the profession in the debate also claimed that architectural education ought to be construed as a form of apprenticeship. Formal architectural education is explicitly criticized for not replicating professional practice to a sufficient extent, in architectural schools. For the proponents of this view, the ideal role of the school of architecture is a form of extended apprenticeship. Categories of ‘reality’ and ‘change’ are used as markers of educational validity and are framed solely within the perspective of professional practice and the marketplace. Only practice can be seen to be rooted in reality, unlike schools that are presented as disconnected from ‘physical realities and the experience of architecture, meaning that they are of limited relevance. The vibrant state of an unprecedentedly changing world is contrasted with the conservative condition of education as preserving an un-defined status quo, as in Peter Buchanan’s comment during the debate:

It is the Schools [of architecture], despite the camouflage of whizzy computer-generated forms, that maintain an obsolete status quo.

Nonetheless, the reliance on (even the best) professional architect to carry out the work of educating young architects suggests a condition similar to allelodidactic education (αλληλο-διδακτική: mutual instruction). Architectural education is already based, to a certain extent, on the principles of allelodidactic education, from the period of apprenticeship. The claims from the realm of professional practice equate to calls for further accession into this now

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123 Viewpoint, Peter Buchanan: The Oxford Union Debate website: http://www.oxfordconference2008.co.uk/
124 See Appendix 1: Peter Buchanan [02:32/34:41].
125 An educational method, developed independently by two British educators, Dr Andrew Bell and Joseph Lancaster, also known as Monitorial System or Bell-Lancaster system. It involved the abler pupils being used by the teacher as assistants who taught other students the information they had learnt previously. The method gained popularity worldwide during the nineteenth century as it addressed shortages of trained teachers and the increasing numbers of students especially in expanding urban centres.
officially abandoned educational practice. Teaching can occur in the place of practice, carried out by the knowledge-holders, the professionals:

Isolated man is very weak, in intellect as in body. It is the play of mind upon mind which originally develops every faculty in the infant and in the growing boy; and only by joint effort, by mutual enlightenment, by learning from predecessors, by alternate inspection, by each verifying what another has suggested, can we make sure and sound advances.\textsuperscript{126}

However, for contemporary education in general, to suggest the allelodidactic approach as a productive method would appear anachronistic. The approach has been disfavoured since the beginning for not employing teachers with sufficiently high goals. Perhaps not accidentally, it was overturned due to insufficiency by the Training System of David Stow, which aimed to ‘cultivate the whole nature of the child, instead of the mere head - the affections and habits, as well as the intellect’:\textsuperscript{127} a rather holistic approach that presupposed the existence of a scope broader than the expected learning outcome.

It remains questionable whether being a qualified architect is enough to be a capable teacher in architecture, which is more or less what the allelodidactic approach suggests. It is an established truth in the field of education that to teach ‘A’ to a body of learners it is not sufficient to simply possess the same amount of knowledge of ‘A’ – in fact, more knowledge is necessary than this. One reason is because teaching, more than being about a transfer of knowledge, is about enabling the building of knowledge structures by learners, so that they can extend their learning beyond the present moment. Furthermore, it is about raising the learner’s awareness of her learning process \textit{per se}, advancing to the meta-cognitive level. For instance, in architecture, teaching involves not only \textit{knowing design} as a subject to teach (the body of knowledge, both explicit and tacit, or domain knowledge), but also \textit{knowing the task of teaching}, and ultimately, being aware of the effect on the students’ value-system that any particular teaching design has. Donald Schön refers to the art of teaching in the design studio as a process of a reciprocal reflection-in-action, comprising several levels of learning. All this means that teaching requires learning how best to handle various situations (if you are a teacher) as well as a good command of the processes, which is something that transcends mere knowledge of the subject to be transmitted.

Overall, an examination of what, in particular, makes architectural education a formal education is at the heart of this discussion. Depending on the philosophical stance, different


models of higher education have developed. One type of categorization\textsuperscript{128} distinguishes between the idealistic, the civic and the utilitarian models on a continuous spectrum of rationales, with occasional overlaps and combinations.

The idealistic model of higher education is associated with what we would call a ‘disinterested’ formation\textsuperscript{129} in which there are neither \textit{a priori} defined objectives nor clear and marketable qualifications obtained at the end of it. It implies a chance for students to engage in a liberal exploration across the spectrum of disciplines – hence the term ‘liberal education’ – usually involving a broad grounding in humanistic knowledge. Typically, this type of knowledge cannot be directly capitalized on by the knowledge holder in terms of establishing oneself as a professional. In this sense, at the antipode of this model lies professional education. Related to this idea has been the notion of the university as a place where students pursue self-exploration. We might see this perception of education rooted in the ancient aphorism of ‘γνῶθι σαύτον’ (to know thyself). An architectural education subscribing to this model of higher education would include in its programs domains of knowledge not restricted by the scope of the professional practice – its graduates would be educated individuals, equipped with a critical capacity to obtain an insightful grasp of complex situations and affront various kinds of (architectural) problems, not by domain-specific training but by intellectually maturing, mind-broadening education.

At this point, it might prove beneficial to bring forth the distinction between learning and education – the latter might also be referred to as ‘Bildung’ or ‘Παιδεία’ (paideia) – as Arendt has pointed out that ‘one can go on learning to the end of one’s days without for that reason becoming educated.’ For Arendt, the relationship between teacher and student is characterised by authority and trust. Arendt stresses the significance of two notions, authority and tradition, in efforts to overcome the crisis of education. On the one hand, the authority of the teacher presupposes their assuming responsibility for introducing young students to our world, of which they will be part. On the other hand, tradition remains important in ensuring that young students have made contact with and understand the existing world, before any (informed) attempt to subvert and change it, as the result of education. On this view, being educated in architecture would mean getting to know oneself by being educated about and in the world.

Criticisms of the philosophy of this model focus on the idea that a university is held apart from the mundane affairs of the wider world. This criticism derives from the utilitarian

\footnotesize{\textsuperscript{128} Donald E. Heller and Claire Callender (Eds.) \textit{Student Financing of Higher Education: A comparative perspective}. Oxon: Routledge, 2013.}

\footnotesize{\textsuperscript{129} Reflecting strong continental traditions, referred to by either the German term ‘Bildung’ or the Greek term ‘Παιδεία’ (paideia).}
model of education. An unusual, or apparently extreme, example of institutionalized protectionism of the university against interventions from the external world has been the legal measure of the ‘academic asylum’. This status was granted to Greek universities to secure freedom of expression of ideas and opinions. The measure has been recently targeted as a graphic expression of this isolation of the university from the ‘real’ world.\textsuperscript{130}

The civic model, on the other hand, is based on the reasoning that university studies should be integrated into the enterprise of creating and cultivating in students a civic or even national identity and culture. A contemporary, more advanced rationale rejects the nationalistic option and posits that the university teaches an expansive and inclusive world culture.\textsuperscript{131} A characteristic feature of this model is that the university is depicted as part of the world rather than as a refuge from it. Educating for citizenship is this model’s ideal.

Finally, the utilitarian model holds that higher education is designed to teach skills and training that will later play an instrumental role in the individual’s life and, in turn, reach wider society. Opposing the principles of the idealistic model, it advocates the need to operationalize the knowledge domains by which the various studies are organized and, in wider university terms, prioritize efficiency and results. More specifically, the model adopts an approach in which education is an instrument of the economy that should prioritise within knowledge only what appears marketable, within a narrow, specialised niche, and by methods that meet criteria of efficiency and economic growth. Accordingly, science and research must pursue what is fundable and directly profitable for private interests, because public funding is considered to be diminishable. Art is valued in such a way that artists should express their individual feelings rather than collective concerns and socio-political phenomena. For Heller and Callender\textsuperscript{132} the fundamental premise of this model is that higher education exists to provide students with an exemption from the world of work for a period of their life and with a head start before entering adult life.

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\textsuperscript{130} The ‘academic asylum’ (άσυλον) rules were introduced in 1982 to ensure freedom of expression and thought on campus, in a symbolic political gesture when memories of Greece’s repressive military dictatorship of 1967-1974 violently attacking student appraisals in university campuses were still raw. The rules made it illegal for police to enter university property without permission by academic authorities and guaranteed students sanctuary from arrest. On the grounds of abuse of this part of the rules a reform took place in 2011. Available from: https://www.timeshighereducation.co.uk/news/greece-scraps-academic-asylum-laws-to-curb-abuse/417826.article [Retrieved 22.06.2015].

\textsuperscript{131} To the extent that this involves also a multicultural dimension, it becomes debatable, at least at the level of intentions, since political European leaders such as German Chancellor A. Merkel (October 2010) and British p.m. D. Cameron (February 2011), have claimed that attempts to enhance a ‘multicultural society’ in their respective countries had failed. BBC was one of the many media that reported these announcements: Stephen Evans, \textit{Merkel says German multicultural society has failed} [online]. London: BBC, 2010. Available from: http://www.bbc.com/news/world-europe-11559451 [Retrieved 11.06.2017]. Laura Kuenssberg, \textit{State multiculturalism has failed, says David Cameron} [online]. London: BBC, 2011. Available from: http://www.bbc.com/news/uk-politics-12371994 [Retrieved 11.06.2017].

\textsuperscript{132} Donald E. Heller and Claire Callender, loc. cit.
In the debate, a key difference between the liberal and the utilitarian ideals of higher education became manifest in the discussion of the notion of theory and its role in education. While the provision of theory is acknowledged to be an indispensable feature of formal education, it is often seen as ‘superfluous’ by members of the profession. The assumption is that all necessary knowledge can be learnt in the real world of practice, where it is meant to be used and hence, justified. Since most architectural students will not end up as, let us say, theoreticians, ‘too much theory’ is not good. It is even perceived as something that distracts students from the essential focus of their studies, which is to give themselves the best possible chance of success in the profession. Therefore, theory ‘beyond certain limits’ is deemed not only superfluous but perhaps even ‘dangerous’. This way of perceiving theory can be expected to be preferred by the utilitarian than the liberal model of education. The difference lies in the version of formal education that each model attributes to it: whether it is the locus of opportunities for opening students’ horizons of understanding, or the place where marketable skills are obtained.

A concern about the criteria for deeming a feature of education ‘superfluous’ (in our case, theory) might be posited on the basis that higher education, as a social institution, is a provision nurtured by society’s capitals (not only in economic terms). In this case, these capitals should be used with prudence and to the benefit of society and as many students as possible. In the event that such a ‘superfluous’ element aims only to satisfy, for instance, the mere curiosity of a few, there is a problem. Furthermore, if this ‘superfluous’ element is the result of a process of continuous divisions of knowledge fields, of divisions of academic labour and of increasing specialization, then the question will once again arise as to whether this corresponds to the real needs of society. The issue of a continuing specialization of knowledge, which might result in a problematic and incomplete grasp of reality and of its complex nature, would be a situation in which something might justifiably be deemed ‘superfluous’.

Overall, the idea that the university (less so than the secondary education) addresses the needs of the many rather than of the few ‘exceptions’, renders the overall concept of what is ‘superfluous’ challenging and debatable. Higher education is already a massive institution in the developed world, which scarcely concerns the ‘geniuses’. If it serves its purposes it should benefit the majority of students. At this point, an apparent paradox emerges in relation to those who claim that it would benefit ‘the cause’ (whether of

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133 It is characteristic that the issue of the dubious value of theory in education, under certain conditions, may be met horizontally by both sides of the debate: ‘so much abstract theory’ was the exact expression that P. Cook used in structuring his case, referring to it as a problem [in 06:40/34:41 of the official DVD].
education or of the profession is not clear) to drastically reduce the number of students in architecture. It follows logically that making architectural studies an affair of the few, of an elite, would, by inevitably fail to remove any elements that have been deemed ‘superfluous’. In effect, the proposal to reduce the population of students in architectural education, based on the offer-demand effect, would no doubt affect the state of the labour market, through the resultant reduction of practicing architects, and therefore the range of services offered. Therefore, the arguments to the effect that theory is ‘superfluous’ and that the number of students needs to be reduced do not seem logically compelling.

Adopting another perspective, one realises that apart from the obvious and direct benefits that the ‘superfluous’ (theory) may or may not have (what we would call instrumental benefits), there may exist other, less obvious, ‘second-order’ benefits for the learner or the broader society. The opportunity to make such an investment in a non-obviously and non-directly beneficial area (theory may just be one example) would seem to suit the privileged (exactly for this reason) sphere of education rather than the pragmatist sphere of the profession or the market. A good example of second-order benefits, of those that may escape our initial understanding when we examine what is ‘superfluous’ and what is not, using exclusively first-order criteria, has been presented by Cornelios Castoriadis.134

In a critique of the role of contemporary schooling, Castoriadis refers to the repetitive ‘destructive reforms’ implemented in the secondary education system in France during the last decades of the twentieth century. His example was inspired by the then new guidelines of the ministry of education, to teachers of mathematics, who were required thereafter to teach students only the formulation of theorems, without their respective proofs, and instead, to train them with exercises. Castoriadis claims that in a rationally conceived educational system, students are taught mathematics neither for the sake of gaining familiarity with the one or the other theorem nor with solving problems – which would be the obvious part. Instead, he claims, they are taught mathematics in order to comprehend and learn, at least for once in their lives, the significance of a rigorous proofing procedure. If the objective of teaching mathematics at schools were to train students in accounting, then a rigorous proofing procedure would be deemed superfluous (and frustrating). But as Aristotle would have put it, claims Castoriadis, what students need to be taught is to discern between cases: those in which the rigorous proofing procedure is necessary, and those in which verisimilitude is sufficient. What Castoriadis intends to point out with this example, is possibly what I have just previously called second-order or non-obvious benefits which

education, unlike the realm of the professional practice as a place of learning, can foresee and plan for. The difference between the two spheres, professional practice and education, is probably the condition of ‘luxury’ that the modern educational systems are found in – a notion that in this respect is related to the category of ‘unconditional’.

Perhaps, underlying this discussion is a critical trait that the educational institution has in comparison with the ‘real world’ as a place for learning, which is none other than this capacity to encourage the ‘superfluous’, in the sense of something beyond first projections, and despite any pragmatic, practical reasoning. The thesis considers the parameter of the ‘superfluous’ in the following part, in the proposal for architecture’s descriptive didactics.135

1.3.1 The Oxford Union debate – Codification of the arguments

The arguments of each side of the debate are codified with the intention of looking deeper and amplifying them, by unveiling and discussing their underlying perceptions, to treat them in a productive synthesis that this event failed to achieve in situ. This processing begins with the text of transcripts,136 which were derived from combined sources: my hand-written notes taken during the event, a digital audio recording produced as a back-up source, and the conference’s official video recording of the debate,137 sold by the organizers later in DVD format. The organizers’ official video compilation, in addition to covering the main event, included snap-shots of short interviews given by keynote participants, just moments before the beginning of the event, in an attempt to present a more complete picture of the uttered opinions and arguments.

A first level reading of the debate enables one to identify a primary set of perceptions and ideas that dominate and structure the discussion about architectural education. If suitably formulated to fit both sides debate, these perceptions and ideas stand as rough generalizations138 of their positions, which are subsequently used to underpin a relevant deontology, as far as the educational system is concerned. As a general remark, in the arguments from both sides it is possible to detect, in the place of an objectified description of the current conditions within which architectural education operates, a common narrative of change, fluidity, and mobility in contrast to the allegedly stable world of the past. These perceptions, despite their positive connotations were, at times, used in a metaphoric way with to the purpose of forcing their opponents to concede to their arguments.

135 Chapter 5, section 5.5.
136 In Appendix 1.
137 The DVD was compiled and offered for sale a few months after the event: ‘The Oxford Conference 2008. 50 Years On – Resetting the Agenda for Architectural Education’. Ordered from: http://www.oxfordconference2008.co.uk/
138 As yet, unchallenged by their opponents.
What follows is a brief presentation of these arguments, with the intention to analyse and rationalize them.

1.3.1.1 Proposition Arguments

The arguments developed in support of the motion concluded that architecture would indeed be better off without Schools of Architecture and were mostly put forward by professionals. Characteristic of the discourse of this side is the objectivist use of such concepts as ‘change’, ‘status quo’, ‘world’, ‘reality’, which are uttered with their original denotations in mind, neglecting their relativity within the context of different subjects. A second reading of these concepts, as employed in the arguments put forward by the proponents of the motion, indicates that they propagate stereotypes: ‘change’ is unconditionally taken as positive, ‘status quo’ is only negative, ‘world’ is associated to the fiscal economy and ‘reality’ is narrowed down to the scene of the marketplace. Further, it becomes clear that the intention of the speakers is to use these terms in an ideological and political vacuum.

The first argument revolved around the idea that as the world is changing and practice is changing as well and therefore practice is a privileged part of the ‘real’ world, in contrast to education. This first argument was delivered primarily by P. Buchanan.\(^\text{139}\) It was essentially based on the common premise that the world is changing, that practice tracks these changes and that therefore practice – unlike education – is intrinsically connected with the [real] world. This argument involves a partial perception of the ‘world’; one that tends to exclude other dimensions that might appear irrelevant to the domain of economic activity. For example, in this view, culture, which is lived, experienced, produced within and transmitted through education is not considered part of the changing world, which education either follows or even contributes to. This perception appears to not to include education as one of the important elements of the world, particularly of young people.

A second argument, articulated by Peter Buchanan,\(^\text{140}\) was that professional architectural practice is collaborative in nature, and that architectural schools cannot instil this culture of collaborative practice. While one could perceive in this position a reproach of the dominant culture which is both competitive and individualistic,\(^\text{141}\) it would be unfair to attribute these traits solely to the domain of education and disregard them in the realm of...
professional practice. Besides, collaborative spirit can be observed in practice only where necessity imposes it rather than as result of a disinterested ethos. It would be possible to accept this premise of this argument if there were any indications of an ‘altruistic’ merge of the competitive private professional practices to the benefit of the recipients of architectural services. Instead, what practising professionals construe as a collaborative ethos seems, in actual fact, to be an involuntary but pragmatist response to the necessity of mutual complementation between distinct professional (sub-) specialties: which generally fail to overlap, and are hence not really in competition. Teamwork in schools usually takes place among architectural students rather than among students of various disciplines. In this respect, architectural schools may be failing to provide their students with conditions such as inter-disciplinarity and the respective experience of collaborating with people from other disciplines. However, teamwork as a mode of learning is practiced extensively in schools and often it is nothing but a lived example of collaborative ethos – for instance, in live projects.

Nevertheless, and despite the relevant allegations from the field of practice, architectural schools are part of the greater culture of our times. They do inculcate individuality and competition by various methods. Relevant critiques of studio culture and the tradition of the design studio review are now common.¹⁴² In fact, in the realm of practice, rather than reproaching schools for lack of a spirit of disinterested humanism, they are denounced for not sufficiently instilling in students the ideals of the market – at least, not as much as the marketplace would prefer. An issue that is generated by this specific discussion addresses the dilemma of whether learning is more effective when it is ‘collaborative’ or ‘solitary’ (and why). This question will develop later in this thesis into a question about the primacy of either the socio-cultural contexts or the inner creative self over learning and teaching in architecture. Finally, it will be rhetorically articulated in the thesis as learning architecture ‘in Republic or in Solitude?’¹⁴³

A third argument employed in the debate suggested that the field of professional practice is identified with change and progress, in contrast with schools, which are criticized for maintaining the status quo, assuming the role of institutions of conservatism.¹⁴⁴ This argument was based on the premise that education has a conservative role, which is to preserve and perpetuate previously established knowledge, values and ethos. At the same time, education cannot abstain from a subversive role that is inherent to it: to subvert the old

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¹⁴³ See chapter 5.
¹⁴⁴ See Appendix 1: Peter Buchanan [02:32/34:41].
and introduce new, unprecedented knowledge and ethos. It is precisely due to this double role of education (the conservative and the subversive), that certain changes at the level of ideas and of knowledge cannot come but from the field of education. I intend to discuss the implication of this contradictory nature of education on the role of the university in the following part of the chapter. In conclusion, it is claimed that sufficient pressure for change and innovation originates in practice rather than in the calm waters of education.

A counter argument would hold that new things can also be produced in the field of architectural education, mainly because of the lack of interconnected external, private interests, allowing for free experimentation, unlike in the field of practice. However, adopting for a moment the debaters’ point of view, it would be useful to make a distinction here: the predominant motive for producing innovation and/or change is mostly the economic interest (a driving force of the economic market, where practice operates). Conversely, education appears to be (relatively) free of such economic motivations – at least in the form that we have come to know it for the most part of the twentieth century, as a generalised, public institution in Europe and other parts of the world.

Economic and non-economic motives can produce totally different criteria for judging what is worth exploring, researching, inventing and producing – they even differ in their judgements of what does and does not constitute a problem that needs solving.

Scientific research provides useful examples of the significant impact that the difference between economic and non-economic motives can have. Research on treatment medications and vaccinations for HIV and AIDS, and the change each has undergone over time, is such an example. Since the early stages of research and for a long period subsequently, it was economic criteria that determined the balance between research into treatment medication and research into preventive vaccination. Upon early discovery of the ever-changing nature of the retro-virus, large pharmaceutical companies proved to be less willing to invest in research into vaccines – virtually moving away from it – because they thought science was too difficult; in others words, too costly. Hence, vaccines were seen as poor business which resulted in a widespread opinion that it was impossible to produce an effective HIV vaccine. More recent evidence demonstrated that these predictions were totally inaccurate. However, pharmaceuticals then opted then for research into medications, primarily because it would return a profit at any given stage of its progress.145 Today the scientific community acknowledges that precious time has been lost in areas of research that

were impeded by economic criteria. As a result, several bad decisions have been made, with long-term consequences, based on the premise that ‘the market knows best’.

On the other hand, one could claim that a field with absolute freedom (say, if education were in this position) from constraints and limitations and, generally, of externally imposed problems is unlikely to have any incentives for change. But again, it is useful to remember that education, far from being a field of absolute and endless freedom, exercises unceasingly and contemporaneously its conservative role. Therefore, it is one domain where the need for subversion and change is born and, more specifically, the domain *par excellence* where this need can be independent of economic or individualistic incentives.

This line of argument attracted responses from the other side of the debate. These are cited in the following part that presents the arguments against the motion. Again, the issue to be addressed is the nature and role of a university school of architecture as an educational institution.

A different (fourth) argument suggesting that architectural education fails in schools, was based on the steady perception, from the proponents of the motion, that architectural schools are meant to replicate practice, both in their method of instruction as well as the content of the instruction of architecture. This argument was based on the assumption that education is destined to be at the service of professional practice, that is, a reproductive mechanism at the service of an economic activity. While this can be the role of a vocational education, education at the university level long ago outgrew this merely pragmatic role (albeit with varying theorisations from the area of politics) and grew into an institution of enculturation and socialisation of the youth. While studying at university, young people, apart from anything else, develop significant parts of their identity and become equipped for their future role in society. And because society is not solely economy but something broader (including other institutions, such as culture), the educational process transcends economic interest, despite the (contemporary) neoliberal fixation with the market.

A second assumption underlying the same position was that if we were to teach practical skills, then simply replicating practice would be sufficient for the acquisition of such skills. Put in another way, inherent in this position is the belief that any subject knowledge that transcends the required in order to work in the profession is unnecessary. This includes theory, as was explicitly stated in other parts of the debate. This is also where one of the differences between learning in the architectural school at a university and in the architectural office lies. Education, more than being about the instruction of a practice,

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146 See Appendix 1, P. Buchanan [02:32/34:41].
provides the service of articulating the knowledge base of that practice, by means of reason. This is what confirms and develops a learner’s potential to contribute to the future evolvement of practice. On the other hand, if a practitioner is to be the instructor, his/her framework of beliefs and understandings cannot adequately replace the external, independent, authoritative sources of truth that a young student ought also to appeal to. Moreover, the mere replication of architectural practice would not ensure a reflection on the very praxis of education that supposedly takes place throughout the education process, as it would not ensure either the comprehension of the educational phenomenon or its nature. Issues such as the student and teacher relationship, the ways, in which a student learns, the nature of domain knowledge in the field, etc. would remain untouched. Therefore, by simply replicating practice there is no guarantee that the benefits of retrofitting the educational process are achieved. Yet, even after these types of comments had emerged in the debate, Peter Buchanan and Robert Adam suggested that schools of architecture should be preparing students for practice. Instead, they claimed, qualified students are ill-prepared for practice.

A fifth main argument developed around the idea that history and theory are the fields of education that are most distant from reality. It was stressed that there is big distance between theory and practice and that theory is more or less useless in comparison to practice:

For the last 100 years architectural education has been distancing learning from the reality of building...instead, architecture is taught as an intellectual exercise of monastic isolation.

Paradoxically, almost the same perception was shared by Professor Peter Cook, although of the opposite side at the debate, who suggested that ‘too much abstract theory is one reason for problems’. This idea, in the context of perceptions about the role of theory and other ‘superfluous’ things in education, is being discussed later in the thesis, particularly in chapter five. Robert Adam continued with the suggestion that admittance to university schools of architecture should be more selective and limited rather than massive. The argument claimed that high admission rates are not a key to national success and related it to the alleged decline of architectural status and authority:

147 Debate participant Robert Adam is an architect trained at the University of Westminster. He has practised in the city of Winchester since 1977. His work is widely published, broadcast and exhibited. He writes, lectures and broadcasts on a variety of subjects including classical architecture, master planning, housing, countryside issues, heritage and globalisation. This biographical information is retrieved from: http://www.oxfordconference2008.co.uk/bio_robertadam.htm

148 See Appendix 1, P. Buchanan [02:32/34:41].

149 Robert Adam in the Oxford Union Debate.
There is a plethora of degree holders. The system of education betrays generations of students with delusions of design genius.\(^{150}\)

This last argument introduced the notion of the ‘status of the architect’ and associated its decline with the transition of architectural education from pupillage to the technical school and then to university. Underlying this argument is the idea that the democratisation of architectural education, with its passage from pupillage to university has resulted in the decline of the architectural professional status (from which other professions benefited). Obviously informed by professional experience and knowledge of the mechanisms of the market, this argument ignores a wide spectrum of theorisations developed in the educational theory, at least of the late twentieth century – for instance, the precedence of exchange of symbolic capital in the place of actual knowledge within architecture schools.

### 1.3.1.2 Opposition Arguments

In the debate, the arguments against the motion (that architecture would be better off without schools of architecture) developed in two directions. In the first direction, the arguments could be seen as drawing from sociological discourse to frame their position. According to this line of argument, architectural schools within the university are a democratic version of education in contrast with the elitist past characterised by the apprenticeship system. Nevertheless, this view would be too narrow if it weren’t informed by recent approaches in the sociology of education. Universities have traditionally been criticised for the opposite; namely for perpetuating the status quo by implying means such as the hidden curriculum, the reification of giftedness to implicitly prioritise embodied cultural capital over intellectual capital, etc. If schools are supposed to be democratic, meritocratic and neutral then, as the sociology of education has revealed, they are far from achieving this ideal. However, it has been widely admitted that it is only through education that one ‘becomes’.

In the second direction, the arguments could be said to have been developed in the framework of the philosophy of education. According to the proponents of the motion, the educational institution is acknowledged to simultaneously inhabit a conservative and a subversive role. The conservative role consists in transmitting established knowledge, as well as values and norms, thus perpetuating the foundations of the status quo. The subversive role of education consists in bringing about the ‘new’. New knowledge and values develop as a reaction, whether positive or negative, to established knowledge, thus shifting the

\(^{150}\) ibid.
balance of the status quo. A relevant assumption held by Jeremy Till was that the university by its definition ought to, and does ‘at its best’, provide the freedom and space to its academic community for quasi disinterested experimentation and creativity.

However, this idea of the position of a university as relatively disengaged from the motives of the social elite – and thereby managing not to perpetuate its privileges - has only been established relatively recently (during the 1970’s), after the European students’ uprising of May 1968. Subsequent theoretical underpinning\(^{151}\) came to strengthen this perception. This view is marked as progressive and is intrinsically opposed to a conservative approach that wants the university solely at the service of the economy and the market (beginning with neo-liberalism of the 80’s).

In the debate, the arguments against the motion and in favour of architectural education as part of formal higher education developed as follows.

One of the primary arguments claimed that architectural schools are indeed places where the ‘new’ in architecture can be born.\(^{152}\) Two examples were brought into the discussion in support of this argument. One was the development of CAD (Computer Aided Design) and the other was Sustainable Design, both generated in schools rather than in the market. Characteristic of the breadth of potential for innovation in schools, away from the pragmatic demands of practice, is that the two elements pertain to totally different levels. One is an operational tool that revolutionised the production and, to an extent, conception of design. The other is a conceptual entity that has opened new horizons in the perceived role and meaning of architecture, which have no bearing on the interests of the market.

A further argument in support of the importance of architectural schools revolved around what appeared to be an anthropocentric reading of three poles of the educational phenomenon: architecture is at the centre, creativity is the means, and the person is the essential element. The person carries the intentions to produce architecture; the person is the subject of this missionary enterprise that is architecture: ‘it is the person’s ability to help this planet’.\(^{153}\) What is worth noting about this argument is the emphasised shift of focus from the institution to the person. Since the [architectural] school is about the evolution of the individual, and not about the evolution of the institution (either profession, or school), its role is paramount.

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\(^{151}\) For instance, by sociologists of education, one prominent representative of which being P. Bourdieu, as well as by other thinkers, i.e. by members of the Frankfurt School, etc.

\(^{152}\) The principal proponent of this argument was Jeremy Till.

\(^{153}\) The argument was articulated by Sir Peter Cook and, to a great extent, it appeared to crystallize his own experience of architecture, taught, learnt and practiced.
For P. Cook ‘creativity is based in survival, in the manipulation of people’s ability to be useful’. His claim here is twofold: on one hand, it is the acknowledgment that creativity is motivated by needs, ‘survival’; on the other hand, he emphasises the human need to be accepted, respected and acknowledged by the community, by being ‘useful’, hence the role of education is to contribute towards the fulfilment of this need. At a third level, this claim insinuates the individual’s innate psychological need to do the right thing, and thus be useful. There is also a basic philosophical principle of emotivism at play: evaluations about what is right or wrong are generators of emotions, therefore by doing the right thing one feels ‘useful’ (meaning useful to others, hence a proof that one complies with what is generally accepted as ‘the right thing’) and thus experiences positive emotions. The idea is that no one knowingly aims to experience negative emotions. Peter Cook enriches this notion of education as ‘a business’ of self-realisation, with the parameter of ‘play’: play is an important element in the process of releasing the individual’s creative forces, again triggering the cycle of positive emotions, which engrained in the architectural learner’s heart (or brain) will ensure that he or she is on track towards a successful, productive and appealing career. For other thinkers, ‘play’ is the child’s characteristic approach to reality which, associated with generous doses of fantasy, results in rich but more authentic (hence original, innovative, unique) creativity. This approach, over time, fades and is replaced by more logical and judgmental capacities. In light of such a view, some architectural scholars and educators identify a problem; that creativity may be pre-emptively developed in the early stages of architectural education. For instance, Correa suggests that two separate disciplines, in distinct educational settings, should address these instincts. His claim assumes that learning in architecture is motivated by two different sets of cognitive mechanisms (the visual and the verbal). Further, he stresses that in the early stages of learning in the visual arts, talent and creative capacity are at risk of being snuffed out or pre-empted, and should therefore be reinforced from the outset. Students must develop them as a kind of reflex (‘the shooting arm’) in order not to be blocked by the concurrent development of talents other than the visual, such as the verbal.

Picking up the same line of thought, the architectural school was then presented as the place where the individual [the young student] connects with the collective sphere, through the educational adventure, in the most ideal conditions possible. This was contrasted within the sphere of practice. More precisely, it was suggested that ‘the business of self-realisation

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is not just an egocentric issue”, implying that there is a question as to who ‘the other people’ and ultimately, the society, with whom the student-architect will need to interact are. The person operates in relation to the society: ‘It is a question of communication’. We can take this to mean either that architectural work (product) is always addressed to other people (recipients, clients) and has a reference to a wider context and the society. Otherwise, what may be implied is that learning is a social process (we learn with others and from others) and education is an institution of socialisation. The ‘business of self-realisation’ involves the discovery by the individual of the area where they can be ‘useful’ and then excel. The roots of such idea to be useful (through work) and personally excel, may lie in the tradition of the Protestant work ethic. 

As Sir Peter Cook went on to elaborate, the architecture school is primarily about the evolution of the individual; it is about creating the conditions for the necessary influences upon the individual (student) to occur. In fact, he stressed the value of the multiplicity and richness of these influences, which derive from the continuous educational cycle that he describes. This evolution results from the influences of a ‘mixed world’ of office, good/useful architects, inspirational teachers and schools. Drawing from what he sees as a European tradition, he describes the process of ‘dragging’ the most useful architects into the School who bring with them their experience of building, the eventual connection of the School with the architectural Office, the pulling of talents (students) out of the School back into the Office, etc. A literal circulation of experience and its sequential baptism in both the practical wisdom of the office and in the creative freedom, passion, partisanship and involvement within the academy, is a situation best described in unifying terms – ‘not an ‘us-and-them’ situation’. Initially, we can identify in this position the intention to balance the views and bridge understandings about architectural education, between the extreme, polarizing arguments that dominated the debate. At a deeper level, we can identify the roots of the argument in the principles of Dewey’s pragmatism, particularly in his understanding of the (educational) experience and its role in learning. On the other hand, the particular attention that this argument demonstrates with regards to the importance of conscientious, active involvement of the learning subject, also insinuates a link with phenomenology.

This argument was also part of Sir Peter Cook’s participation in the debate. In the quotes are his words. I am using the term in the sense that emanates from the work of Max Weber, particularly in his book *The Protestant Ethic and the Spirit of Capitalism*, published in 1905. The concept emphasises that hard work, discipline and frugality are traits of a person, or a general culture, that has been influenced by the values of the Protestant faith. The phrase is used nowadays to credit cultural characteristics of societies of Northern, Central and Western Europe, including the U.K. An individual can follow the Protestant work ethic without necessarily being a religious Protestant. The concept may be indicative of the difference in the way that the individual relates to society, across Protestant, Catholic or Orthodox cultures.
The argument concluded with the idea that (architectural) school is where you can ‘expose the passion of partisanship and involvement’, whereas the outside world is ‘where you keep your head down’. This argument essentially offers a picture of education as the place where the sympathetic (also disinterested, altruistic, collaborative) is encouraged over the egoistic - the field of which is the world of professional practice, the office, the market, profit. The argument, in an amplified form, would benefit from relevant ideas in the works of both Arendt and Baudrillard on consumer society and the relationship between education and the marketplace.

A different dimension of educating architects in schools was suggested by Sir Peter Cook. He claimed that an educational institution is the realm where students can discover meaning in their life, which will guide them towards the route of creativity and usefulness. ‘Get up and be useful! Contribute!’ was his call. The emphasis on ‘usefulness’ perhaps references the tradition of utilitarianism in the philosophy of ethics (this consequentialist approach, in which useful outcomes are the measure of what is ethical, was promoted by John Stuart Mill, while on the other hand, deontology, which emphasized the fulfilment of duty, was advocated by Immanuel Kant).

Finally, in a critical view of the current educational system, Cook emphasises the relationship between the Institution (the organisation that takes over educational duties) and the way in which you can be inspired: it is the choice of didactics and of the assumptions about how one learns best, that make the difference. ‘Invent another architectural school’ translates into ‘invent a different relation between institution and inspiration.’

In conclusion, the discussion highlighted sound arguments, thus suggesting that the end of ideological debates about the goals and character of education is yet to come. The audience was thus offered a meaningful response to the dominant discourse which tends to identify knowledge with information in education, and society with economy. However, the arguments – both against and for the motion – consisted of judgments at the level of pedagogy even when they addressed questions of didactics, and vice versa. For instance, the issue of what type of architect society needs is a subject of philosophy of education and arguments about it pertain to the order of architectural pedagogy. Yet, the employment of such arguments would not answer the question of how architecture is better taught and learnt, which pertains to the area of didactics. Signs of terminological confusion in this case reflect a conceptual one. Consequently, the treatment of the issues in similar terms could not help but result in polarization rather than in conclusiveness of the discussion.

Sir Peter Cook in the debate, in opposition to the motion.
Articulated by Sir Peter Cook and Jeremy Till, who both argued against the motion. In Appendix 1.
1.4 Case study II: A teaching hospital for architecture

The second example of discussion at the extremes is a proposal by Alexander Tzonis in his keynote lecture at the 2007 International Conference on Architectural Education in Beijing. The conference was organized in cooperation with TU Delft, at the School of Architecture, Beijing Central Academy of Fine Arts (CAFA), September 14-17 2007.

Alexander Tzonis is a Greek born architect, researcher and author. He has contributed to architectural theory, history, and design cognition, bringing together scientific and humanistic approaches in a rare synthesis. At the time of the lecture he was Professor emeritus of Architectural Theory at the Delft University of Technology in the Netherlands, where he founded and directed the AKS-AIIA (Design Knowledge Systems) research group on architectural cognition. During the same year that the conference took place (2007) he was appointed professor of Architectural Theory at Tsinghua University.\(^{159}\)

The proposal specifically focused on the need for architectural education to obtain an equivalent of the ‘teaching hospital’ in medical education. The suggestion was original and even subversive, as it used this metaphor from medical education to demonstrate that architectural education would benefit from an architectural practice, and specifically from one institutionalised and embedded within the educational setting. For many, the idea would have sounded paradoxical because of the long-established view, which originated with Donald Schön, that architectural education, and its design studio in particular, is the paradigm for all professional education, including medicine.

In regards to the present thesis, a significant feature of this proposition is its directness in targeting essential dilemmas in the broader discussion about architectural education – in particular the question of where and therefore how – architecture can be better taught and learnt.

1.4.1 Case study II: The context

Before articulating his proposal, Tzonis presented a review of the types of deliberations that have taken place concerning architectural education, such as discussions, lectures and presentations as they developed over recent years in various meetings, conferences, symposia, and so on. Amongst these deliberations, he distinguished between

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\(^{159}\) This was his keynote lecture, in the International Conference on Architectural Education, CAFA, Beijing 2007. The brief biographical information was retrieved from: https://en.wikipedia.org/wiki/Alexander_Tzonis. Historian and theorist Kenneth Frampton in the History of Modern Architecture, credits the pair of theorists, Alexander Tzonis and Liane Lefaivre, with coining the term ‘critical regionalism’, which referenced an approach to architecture that sought to counter the placelessness of Modern architecture (of the International Style) and yet avoid the whimsical particularity and ornamentation of Postmodern architecture.
three general categories: (1) those concerning ‘what to teach’ and ‘how to change the current curriculum’ in architectural education, (2) those concerning ‘how to teach’ and finally (3) those that proved to be largely irrelevant discussions. It is worth noting that among all the topics to be found in the field, he emphasised those that pertain to the domain of didactics, the ‘what’ and ‘how’.

On top of this, Tzonis claimed that, generally, discussions about ‘what to teach’, along with the question of ‘why’ – the specific criteria behind the selection of the subject matter – are an important part of the teaching-learning issue. There are two possible approaches to these issues. One is to identify emerging themes in each epoch; for instance, about twenty to twenty-five years before the time of the lecture, the theme was history and its position within the curriculum; ten years before the lecture it was the CAD and the media, and so on. The alternative is to establish priorities – that is, to lay down criteria for architectural curricula design and development. As examples of other topics that also surfaced during the discussion, Tzonis mentioned the question of ‘who is going to teach’. This was a reference to the dilemma about whether or not to shift teaching responsibilities on specialised courses from external specialists (non-architects) to architects with a specialty. Another issue that was pertinent to these attempts to determine the ideal requirements of those teaching architecture was the interrelation between practice experience and the teaching experience. In the same category, the issue of the relationship between teaching and research in architectural education was also raised.

Tzonis expanded on the issue of ‘how to teach’, which is often part of mainstream enquiries regarding architectural education pedagogy. He emphasized the allocation of time, money, and people that would be required to do the task – and how these issues are ultimately reduced to questions of hours, years-structure, the relationship between lectures and courses, how the studio operates, and so on. According to Tzonis, discussions about how to teach constitute ‘the machinery’ of teaching and learning in architecture, and their importance lies in the linking of all these discussions (about courses, lectures, studio, etc.) with (architectural) practice. As an aside, Tzonis also remarked upon the importance of practice in the educational process of architects.

Tzonis identified finances as a principal factor in the evolution of the professional field of architecture, its reforms and innovations. Beyond finances, the hierarchy of the factors (in decreasing order of importance) were listed as follows: the legal, the intellectual, and the scientific. At the same time, historically, he also identified as the driving force for

160 In this context, the term ‘pedagogy’ is understood in terms of didactics: ‘how to teach’. For the conceptual and the terminological clarification offered in this thesis, please see chapter 3.
reforms in architectural education, an ongoing process of division: from the historical dividing of Schools to the internal dividing of courses and specializations within institutions.

To explain the process of division within specialties, knowledge fields, and institutions, Tzonis started with the example of his former School (which he attended during the 1960s and 1970s) - Harvard University. There were a number of innovations and breakthroughs during that period at the Harvard School of Architecture, including the introduction of Urban Design and Computer Graphics Design. The former, the name initially given to a new area of teaching, lead to a new technique and a new division in the profession which subsequently spread across the world. The latter, after also having been disseminated globally, subsequently disappeared as a division. He then mentioned his own autonomous interdisciplinary unit at Delft, the Institute of Design Knowledge Systems, whose aim is to produce cognitive tools which can be employed as instruments for design.

To sufficiently address the issue of architectural education today, one must address the following questions: What is the most pressing problem of architectural education today? How did reform (in architectural education) happen in the past and how will it happen in the future?

Tzonis recalled Vitruvius’ approach to architectural education which, when compared to contemporary problems, doesn’t seem to have changed much. In essence, his claim is that an architect must leave education literally knowing everything there is to know about architecture. Likewise, centuries later, when Colbert (prime-minister under the Louis XIV regime) founded the Académie Royale in Paris, almost everything was supposed to be taught: from engineering to architectural problems and theory of architecture (perspective). The following reform in 1741, before the French Revolution, resulted in the first division into a School of Infrastructure, the École Nationale des Ponts et Chaussées, and the École des Beaux Arts. In the post-revolution era, the École des Beaux Arts embodied the republican ideology in its pedagogical approach, taking the form of ‘given a problem, one develops a project’. Not only perspective, but also organisation of space, was introduced in teaching. The subsequent evolution of the École Polytechnique had two curricular characteristics: (i) systematic teaching of courses and (ii) practical exercises.

In Germany, a pragmatic and systematic curriculum structure consisted in both courses and practical exercise. In the morning, theory was taught, while in the afternoon it was practice in the studio setting. This educational duality survives to this day.

\[\text{161\ Vitruius was a Roman author, architect and civil engineer, who lived during the first century BC. His extensive multi-volume work }\textit{De Architectura} \text{is his only surviving work, but is significant for historians of architecture.}\]
The brief historic account that Tzonis offered in his lecture aimed at explaining evolution and innovation in architectural education as a series of splitting of institutions, specialties, and courses, which, as he points out, resulted in a decrease in the practice of synthesising knowledge.

Based on this failure of synthesis he came to propose architecture’s ‘New House’. Since specialised knowledge, according to Tzonis, is not organically articulated, combined and synthesised, several pseudo-questions such as ‘how to reform the studio’ and ‘how to relate the studio to the courses’ inevitably arise. These, in turn, fail to tackle the essential dimensions of the problem. He thus concluded that what is needed is a radical proposal for the advancement of architectural education.

Borrowing from the example of medical education, Tzonis compares architectural education with the process of constructing a building. He recalls its history of successive divisions of knowledge fields, divisions of labour, innovation through increasing specialisation of sciences and synthesis in order to reach the desired end (to make a patient healthy). The educational model that evolved over time for medicine was finally materialised in the concept of the academic – teaching – hospital. Its fundamental features are: the medical professor, the students of all different levels around him – with prescribed roles – and the academic seminar. The latter represents, for Tzonis, the reflective aspect of teaching, which is immediate, in that it follows-up daily and is accompanied by theory courses.

This educational model functions on the basis of the two following presuppositions: (i) ‘you can’t teach something complicated through theory alone’ and (ii) ‘you can’t teach something heterogeneous through simulation alone’ (i.e. it is based on the idea of imitating professional reality, as was the case with architectural education up to the 1970’s).

Tzonis proposed an institutional breakthrough for architectural education, comparable to past institutional innovations, and argued that architecture needs to acquire what he called its own ‘New House’, or the equivalent of the teaching hospital – essentially, a ‘teaching architectural practice’. It is acknowledged that this is already taking place – although only partially – in educational programmes of architecture, taking various forms such as student apprenticeship or work experience in architectural offices. This is integrated in varying degrees into the educational systems across the different parts of the world (more in China and the US, less consistently in continental Europe). However, for Tzonis, the fundamental characteristics are still missing across the board: the medical professor, the multi-level student body, the formally attached academic seminar.
1.4.2 Case study II: The proposal

Tzonis’ original and apparently ‘extreme’ proposal, the constitution of an architectural ‘teaching hospital’, is developed around three key features: the medical professor, students of all levels and the academic seminar. The proposition, with its specific structure, aims to answer some of the most pressing questions faced by architectural education. What follows is a discussion of these features.

One key feature of the proposed structure would be the equivalent of a medical professor. Roughly construed, a medical professor is someone who leads a distinct unit (i.e. a clinic) and who teaches the subject while at the same time practices it in a paradigmatic manner. This involves, on the one hand, providing an example of the optimum quality of practice (university hospitals are acknowledged for high-standards in scientific expertise and state-of-the-art medical services) and, on the other, an extended responsibility in terms of educational praxis – from having the command of teaching and learning process to organizing relations between the other parts, such as the students of various levels, other personnel, etc.

If we were to project this framework onto architectural education we would expect to see an ‘architectural professor’ in architecture’s ‘teaching hospital’, or what Tzonis called ‘architecture’s New House’. The ‘architectural professor’ in this case would exhibit comparable characteristics. At first glance, one might notice a hint of a paternalistic, authoritarian or even emancipative spirit within such a model of the pedagogical relationship. But if we recall Hannah Arendt, education is par excellence in the field, in which authority and tradition are the two essential variables of the successful formula. In Arendt’s terms, the authoritative trait of the teacher derives from his or her assuming responsibility for introducing young students to the world of which they will be part. In her terms, this would be not just the world of architectural practice but the world of Architecture and, through architecture, the World. Such would be the responsibility of the ‘architectural professor’.

In this ‘New House’ of architecture, the ‘architectural professor’ would be surrounded by students of all different levels – not accidentally but prescriptively. This is a situation where students are not simply in close proximity to practice, but are actually in-situ. They are involved in the situation with different degrees of participation, in the way that medical students of various levels are involved in the medical procedures within the hospital.

One element worth noting in this framework is that all students, by being around each other and around the ‘professor’, acknowledging each other’s’ distinct roles, becoming

\[162\] Hannah Arendt, loc. cit.
aware of each other’s function and ultimately interacting, gradually gain not only good knowledge of their prescribed subjects (by doing) but also develop a spherical, almost intuitive, understanding or grasp of the situation. This is both in terms of the subject-practice to be learnt as well as of their learning process *per se* (thus, they develop ‘metacognition’). We might, as a result, expect learning among others to become multi-dimensional and, under multiple stimuli, deeper.

In addition, most contemporary theories of learning emphasise that learning takes place in the social interactions with others, and that this is a much more dynamic process than learning individually in the conventional sense. An initial reason for this would be the following: when learning in in the traditional way, in solitude, one can cope with formal, explicit knowledge. However, a whole spectrum of other types of knowledge might remain out of the learner’s focus. Conversely, interacting with others and learning within social contexts involves another kind of knowing which transcends information and enters the realm of experience (i.e. going beyond just technical knowledge but tacitly acquiring norms and values). As much as progressive education has sought to reserve a central role for experience in students’ learning, in an educational setting such as the teaching hospital (in our case the *architectural* ‘teaching hospital’), experience is not instrumentally used for educational purposes (planned for in advance or artificially) but genuinely lived *in-situ*. In other words, where design studio-based teaching requires deliberately constructing educationally useful experiences on behalf of the students, the setting of an architectural ‘teaching hospital’ offers natural and genuine experiences.

Having outlined the social dimension of learning in architecture’s potential ‘teaching hospital’, I will now re-address the issue of knowledge. In current architectural education, live projects – which come closest to the model offered by the ‘hospital’ educational setting in terms of working in ‘real’ conditions – are available for students to opt into later in the curriculum. However, during the initial years of study students are required to approach architectural design primarily in the design studio. The studio feature is structured in a way that learning objectives follow a progressive ascendance of knowledge complexity in design exercises. It would not be inaccurate to suggest that this process reflects a linear approach to knowledge acquisition: from the simpler to the more complex and from the already known to the new, etc. Moreover, the design studio feature of architectural school is exactly this: an exercise. Stimuli are ‘administered’ in phases, unlike the totality of a therapeutic approach.

In the ‘teaching hospital’, however, regardless of the prescribed roles associated with the knowledge-levels of students, each individual student is exposed to a ‘total stimulus’, which is the practice in its totality that takes place around to them. In other words, students
in a setting such as the ‘teaching hospital’, while they are dealing with what is prescribed respectively to their knowledge-level, at the same time have their perception of the multiple dimensions of architectural ‘praxes’ (in the sense of practicing architecture, beyond the limits of professional practice) shaped from the outset, and throughout their studies.

This kind of exposure of students to a ‘total stimulus’ would become a didactic strategy analogous to what we find in the new linguistic approaches to foreign language learning. The idea is that rather than having learners start at a slow pace with the basics (letters and syllables, then words before sentences) and follow a linear approach to knowledge, they are exposed, from the outset, to meaningful communication. The implication being that in response to this challenge they adapt at a faster pace than they would if exposed to a more conventional approach. In the case of architecture’s ‘teaching hospital’, this would occur naturally.

A third feature of architecture’s ‘teaching hospital’ is the academic seminar. As Tzonis puts it; ‘it is the reflective aspect of teaching, which is immediate, it is following-up cases daily and it is accompanied by theory courses’. The academic seminar is where osmosis takes place between teaching, learning and acting (practicing). Furthermore, it is where the analytical approaches balance with the intuitive. ‘Following up cases’ presupposes personal engagement with and active involvement in issues. Following up cases ‘daily’ ensures continuity and consistency on behalf of both teachers and learners, along with meta-cognitive enactment. In connection to the academic seminar, theory courses complement praxis, either introducing it or confirming it. A plausible difference with more conventional architectural education would be that the established antithesis between theory and practice, which is confirmed by quasi-autonomous academic realms (specialists are different persons, sometimes educational units and even administration are separated), may not be met in the ‘teaching hospital’. The ‘academic professor’, along with a teaching team, is meant to run both the academic seminar and the theory courses. The proximity, temporal or physical, of the two functions is an additional factor in the elimination of the split between theory and practice in the curriculum. Tzonis described the two premises of this feature:

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163 During the academic year 2014-15 I co-authored a new curriculum for the Architectural Drawing course (AD) of the Greek secondary education, on behalf of the Institute of Educational Policy (Ι.Ε.Π.), based on this very principle of the ‘total stimulus’. The course is preparatory for candidates of architectural studies and it is examined as part of the national examinations for admission in tertiary education in Greece. According to the hitherto pedagogical approach students were trained in the ‘drawing language’ ignoring the meanings it communicates and focusing on its meta-language (its ‘spelling’, ‘grammar’ and ‘syntax’), moving in a linear way from the simple to the complex and from the easy to the difficult. With the new curriculum, students learn by addressing meaningful situations from the outset of the process. Methodically, through their initial exposure to a total stimulus, students discover the functions of A.D., progressively appropriating its rules and conventions. They are actually learning by doing.
first, you can’t teach something as complicated only through theory and second, you can’t teach something as heterogeneous only through simulation – i.e. imitation of professional reality, as it has been the case with architectural education up to the 1970s.

A useful response to Tzonis’ conception would be a double comparison with both the design studio and the live project. At this point, I do not intend to proceed with an exhaustive comparison but will simply give some basic remarks. At first sight, it appears that the ‘teaching hospital’ of architecture combines advantages from both of these established features of today’s architectural education system. One basic shared characteristic with the live project would be the issue of ‘reality’: in the live project, learning takes place in the context of a real demand for architectural service, which generates a genuine design problem to be resolved. What’s more, there are real clients and thus student-designers will face real constraints in the process. In these respects, the ‘teaching hospital’ should not be expected to be much different.

Furthermore, it is worth noting that the design studio comes under the realm of the university. Its educational objectives and priorities remain relatively isolated and even protected from external influences (i.e. from the forces of the professional practice and its instrumental demands) so that they may rely upon purely educational criteria. The ‘teaching hospital’ is equally contained within an educational institution and among its priorities is providing the services to education rather than professional practice. This may mean that, for instance, cases of practice are selected based on educational criteria: the benefit of its students rather than the economic profit – in contrast to a situation in which professional practice exerts an influence on education. As another example of prioritizing educational criteria, the teaching hospital in its commissioned projects could emphasize issues of ethics, social responsibility and environmental awareness, among others.

In a sense, the idea of ‘architecture’s New House’ or architecture’s ‘teaching hospital’ is not entirely new: one can compare it with the Bauhaus of the Hanes Meyer period, when students learnt by doing work on real projects for real commissions, which contributed to their school’s financial survival and development – therefore they weren’t simulations of the work-place. Additionally, more recent examples of comparable experimental educational practices are referred to in the literature. One example of such is the Rural Studio, initiated in 1992 by Professors Samuel Mockbee and D.K. Ruth. It was a community-based design-and-build studio, by which the study of architecture was transferred from the studio to the rural location of Hale County. Further, several architects like Lucien Kroll in Belgium, Dolores Hayden in California and Günter Behnisch in Germany, have demonstrated that architecture constitutes a pedagogical practice in which to frame the world, to structure experience and –
by shaping consciousness and identity – to further reinforce assumptions about culture and politics\textsuperscript{164} via the learners’ involvement in real situations.

Chapter 2
Architectural Education: the current context and a historic background

A brief history of Architectural Education in Britain
Architectural didactics: a historic account
Architectural education discourse: a historic account
2.1 Introduction

This chapter presents a historical account of architectural education, primarily in Britain, after the provision of a short, general contextualisation. From the medieval era, through the Renaissance and the Enlightenment, to the more recent Official System, architectural education has developed characteristics that resonate in today's tensions between practice and academy. Typical binary oppositions, from architecture-as-art and architecture-as-science paradigms, or ‘architecture-as-art-value’ and ‘architecture-as-exchange-value’, to learning architecture in schools or out in professional practice, owe their present existence to their having inherited such characteristics. The same applies to the a-theoretical nature of architectural education that this thesis intends to remedy.

2.2 Architectural Education: the context

For more than two decades, global capitalism, intensified consumerism and atomization have contributed towards forming the current educational environment, undergoing various often indiscernible processes of transformation. Education has increasingly been under pressure to respond primarily to economic considerations. In doing so it appears to have abolished ideals such as the comprehensive character of learning. It has also been criticized for failing to acknowledge the distinction between learning and being educated. The era is characterized by the high specialization and fragmentation of knowledge, the absence of big narratives, and the consequent focus on microanalyses of the ephemeral.

Architectural education has not gone unaffected by these conditions: the meaning of architecture as techne, cultural discourse, ethical praxis or social agency has come under question. During this period, public reflection and discourse about architectural education has developed, thanks to a collective awareness and communication between educational institutions. Meanwhile, calls for change have emerged from all quarters of the field: professional institutions, other organisations and educational institutions, and above all architectural educators’ self-reflections and dialogue with colleagues have nurtured this discourse. Often, the commonly expressed need for an intangible ‘change’ refers to a (re)connection of the teaching and learning process of architecture with a wider meaningfulness. Especially during the recent global economic crisis that intensified the antagonism between public and private, architectural education remains in scrutiny.

The issue is now whether we could situate an enquiry into effective, consistent teaching and learning of architecture in the context of such broad questions. Currently, the
debate seems to be primarily preoccupied by pedagogical arguments, although questions seem to be directly relevant to the didactics of architecture. Examples of questions of a didactical order in architectural education would be the following:

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

Any educational practice implies a corresponding theory. The implied theory is always value-laden: it embodies intentions and interests tied to historical, cultural, and socio-political contingencies. Architectural education is no exception: its programs, like any other educational design, are developed on the basis of value assumptions and 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), adequate forms of instruction (that is, how best can content be taught and learned, in what settings and by what means), and learning opportunities for students (inclusion, equity pedagogy, teachers’ knowledge of their students, subjects, and instruction) – all of which constitute features of normative didactics. A study of architectural education cannot ignore the above presuppositions, or the examination of historical premises which shape the landscape of both architectural education and its theory.

The transition from modernity to post-modernity inevitably gave rise to new conditions for architectural education as it provided a new framework for education more widely. Modernity’s emphasis on specialisation suggested a model of education that would be informed by distinctive disciplines. Architectural education followed this paradigm and over time developed multidisciplinary approaches in an attempt to combine expertise from a number of disciplines (from civil and mechanical engineering, to economics, humanities and the arts) with architectural expertise. Further, it was expected that students would benefit from an educational model that corresponded with the reality of the profession.

However, in post-modernity, the shift from colonialism to globalization gave rise to different agendas. On one hand, the modernist perception of history as linear supported

notion of time that is concentrated in a continuous and expanded present. The shift of emphasis from time to space resulted in the increasing re-evaluation of space in the critical thought of more recent years. Our perception of history changed and the emphasis seems to have been placed on human geography: anthropology, ethnography etc.\textsuperscript{167}

In the conditions of devaluation adopted by the post-modern historicist trend that followed, the high-architecture paradigm was criticised for privileging the morphological at the expense of the organisational; experimentalism over custom; and ultimately the text over the object of architecture.\textsuperscript{168} At the same time, architectural education was criticised for ascribing to only partial interpretations of reality, culture and history. Its meaning, role, relevant pedagogies and didactics thus came under close scrutiny:

Is it about developing the free student’s individual expressiveness?
Is it about cultivating the student’s ability to perceive external information and forces?
Is it a process of educating to engage with the larger world and its needs?
Is it a process of coming to terms with society, or even, developing a ‘world’ citizenry and an ecological conscience?
Is it about constructing the student’s identity?
Is it a process of unifying the fragmented areas of knowledge and interpretations of reality into an articulated and meaningful whole?

In recent years, discourse has taken into account the needs of the profession, the relationship of education with theory and with practice, the discipline’s position in the academy etc., but rarely the didactical dimensions of architectural education and educational theory.

This thesis takes up the hypothesis that architectural education could be usefully informed from the perspective of the sciences of education. The nature vs. nurture argument (between behaviourists like B. F. Skinner and progressives like Montessori) lead to two disjunctive theories of design that have an impact on education. Architectural form is seen either as a product of external determinants or as a product of the internal creative intuition. The course of theory from early modernity until now makes manifest an architectural debate endlessly oscillating between an endeavour for the autonomous form on one hand, and a constant concern for commitment to social demands, on the other – respective examples being the Architectural Association (AA School) and the Bauhaus of the Meyer period. The


dynamic balance between the two extremes of this form-ethics dipole has been a significant feature of discussions surrounding architectural education.

Overall, two oppositional schools of thought appear to dominate the inquiry into architectural education and its objectives, each pertaining to either the conservative or the subversive role of the educational institution. One views architectural education as the field of (re)production for the profession. The other, views architectural education as transcending the mere production of successful professionals and responding to intrinsic necessities (we might analogously claim that architecture (as a cultural phenomenon) transcend the mere building of buildings).

The critique that derives from the demands of the professional field reflects a utilitarian ideal of education. The constant changes in society, in the form of labour, technology and information as well as those in the construction industry, have had a notable impact on architecture. Conditions in the profession call for architectural education to adjust and engage in mimicking real practice. Counter-criticisms emphasise the influences of the demands that the profession puts on education at the ethical level: architects acquire an egocentric consciousness of a unique core set of skills and their central contribution to society. Moreover, the model of the ‘signature architect’ allowed architects to be self-justifying and to withstand criticism from others. In fact, individualism and competitiveness have been the dominant ideological and operational frames within architectural education. Many schools have systematically aimed at the production of eccentricity and authorship, embracing vision and originality as their modus operandum. According to one line of criticism, schools fail to handle the generic and the multiplicity of contemporaneity. Form-finding tends to become commercially driven. From a pragmatic point of view, schools rely upon accelerating technological investment and engage in a competition of consuming considerable financial resources. Thus, financial parameters became more critical for a school’s future than ever.

The relocation of architectural education from architectural offices (apprenticeship) to universities, in the late nineteenth century, reflected a split between practice and theory – a metaphor of the split between design studio and theoretical courses. However, this relocation did not result in the abolition of the professional character of studies. At the university,

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architectural education amplified oppositional dualities inherited during the Renaissance. The polarisation between the subversive ‘culture of knowledge’ of the emerging bourgeois meritocracy, and the opposing ‘culture of taste’ of the established nobility, gave way to the long-term binary opposition ‘architecture-as-science vs. architecture-as-art’. Possibly, this has remained the divisive horizon within the discipline until today, which evolves into a series of debatable dipoles that preoccupy education. Examples include rational-intuitive, verbal-visual, functional-formal, text-object dichotomies, to name but a few.

Studies are rigidly structured around a core of design courses – predominantly in studio format – marginal to which are clusters of specialized knowledge, mostly in the form of lectures. The design studio (atelier) remains the primary teaching platform, where architectural literacy, skills and values are assimilated, and where scientific knowledge acquired in extra-design areas is applied. The dichotomy between studio and ‘service courses’ is both practical and symbolic, and constitutes a particularity of architectural education. The credit weight of design studio courses is greater than that of the service courses, and also holds a greater symbolic-value rate. However, this dichotomy of the epistemological content of architecture leads to antithetical pedagogies and didactics in each area. Both the qualitative division of the content and their respective pedagogies presupposed the functional distinction in the learning needs of students. Moreover, it led to the differentiation of architecture from other fields in the academy.

The position of architectural education in relation to other fields within the academy is another source of criticism. Much of this intra-academic critique originates in the fundamental differences between architecture and other academic disciplines. While the primary objective of the latter is the production of knowledge, architecture does not present itself as sufficiently research-oriented. Academic architecture departments produce neither architecture nor the totality of the architectural discourse, in contrast to the sciences. Architecture’s disconnectedness from the other academic disciplines even takes on physical and social dimensions: architecture students and faculty find themselves intellectually and socially isolated from the mainstream of campus life.

Furthermore, much criticism of architectural education derives from within the educational field and unfolds on many levels: epistemological, pedagogical, sociological and

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176 Ernest Boyer and Lee Mitgang, loc. cit.
psychological. Contradictory critiques at the epistemological level present architectural education either as commonly based on analogical patterns of thought, or as over-gravitating towards rationalism and the development of critical judgment. Unwanted consequences are attributed to both cases. The former suggests that design, as an intuitive process, is not built on rational premises, therefore it is not an organisable set of notions that can be taught. In addition, students ‘from the inception of design learn to rely upon a (taught over) poetic intuition. The latter suggests that creative capacity and talent are pre-empted as verbal skills develop at the expense of the visual instincts. Learning in architectural design is defined today as a cognitive process consisting in multiple transactions, each of which is of a completely different nature that cannot be quantifiable by a single measure. Thus, learning is more complex than what oppositional dualities can account for.

A sociological critique of the kind of architectural education that is committed to the reproduction of the profession is that it devalues intellectual capital, favouring embodied cultural capital (a certain form of habitus, which is considered essential for professional success). Embodied cultural capital multiplies educational capital. Design as an intuitive process becomes the ultimate mental habitus, residing in the majority of architectural education establishments. The hidden curriculum plays a significant role in architectural education – the knowledge producer and the social practice. The system privileges the charismatic form of inculcation (implicit, informal transferring of embodied cultural capital) and the production of ‘being something’, over the scholastic form (provided formally as pedagogy) of ‘knowing something’. In many cases, architectural education is criticized for preserving the social status quo, by legitimising hierarchical social relations and by disguising a social process of selection as one that appears to be meritocratic, based on objectified criteria.

As subject areas in architecture are stratified, the hierarchy of symbolic curricular value reflects the degree to which it utilizes students’ embodied cultural capital (the ‘being something’ rather than ‘knowing something’): the design studio is at the top of this hierarchy.

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177 Micha Bandini, loc. cit.
179 Idem.
181 Micha Bandini, loc. cit.
183 Garry Stevens, loc. cit.
184 Idem.
More characteristics and dominant practices of architectural education are primarily observed in the studio. These can be subjected to Foucauldian tools of analysis. Analytical space, atomization, the level of docility in the student body, and use of language and time all regulate power-knowledge relations. The search of truth is reproduced in the studio and dominated by ‘right-wrong’ binary oppositions. The student body is atomized. By constantly competing for approval, it is in the studio where students display their state of docility. Time becomes a measure of great symbolic worth and a measure of devotion. Students’ time is controlled by the studio system as their energy is devoted to the frantic pace of knowledge-consumption rather than asking questions. Under these conditions, in the studio the theories-in-use remain unquestioned as well as the values and the assumptions underlying them. Moreover, the incompatibility between theories of action and theories-in-use is legitimatized.

2.3 A brief history of Architectural Education (primarily) in Britain

In Britain, the evolution of architectural education from the medieval era to the present is marked by the gradual transition from the guild system to the academies, the Beaux Arts and its successor the Bauhaus educational model, followed by the placement of architectural schools within tertiary education. This transition is mediated by the key stages of apprenticeship and pupillage, which appeared with the emergence of the modern profession in the seventeenth and eighteenth centuries. Contemporary architectural education still retains a number of characteristics inherited from that period.

Overall, architecture has tended to be taught and learnt with an emphasis on practice, although there have been exceptions in its recent history when the paradigm gravitated towards other directions, such as architectural science. For some theorists, the Bauhaus

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186 C. Greig Crysler, loc. cit.
189 The idea of a Bauhaus educational model, which allegedly survived in architectural education systems beyond geographical and chronological boundaries, is described in the literature in alternating terms as ‘Bauhaus teaching model’ and ‘Bauhaus pedagogic model’. The difference between the two modifying terms ‘teaching/didactic’ and ‘pedagogic’, as is analysed in chapters 4 and 5, enables a broader comprehension of the model’s function.
190 This relates to the ontological problem of architecture, whether it is an art, science, profession etc. The example here is from: Garry Stevens, *Architectural Science in Retreat? The new anti-science movement*, Architectural Science Review Vol. 31, pp.145-152, Dec. 1988. For Suha Özkan (as per next note, p.147) the only area in architecture where scientifically reliable objective knowledge is utilized, is the area of technology and materials.
teaching model remains the unchallenged, best model for architectural education, because it can be understood in abstract terms. In contrast with the preceding Beaux Arts tradition (that emphasised knowledge acquisition of an extensive catalogue of norms), the Bauhaus developed an educational model that relied on epistemological assumptions (what is best to know and how to teach it), introduced educational goals (often at an abstract level) that could be constantly renegotiated, and engaged in setting out didactic objectives. This was perhaps the first time that this synthesis had been so systematically executed in architectural education.

Instances in which this model were realised include:

(i) the Gropius period; where the structuring of different workshops, the dualistic teaching model of art and craftsmanship within each workshop (*Formlehre* and *Werklehre*), and the establishment of the distinctive teaching roles of the Master of Form and the Master of Craft were all instigated.\(^{192}\)

(ii) During the Hannes Meyer directorship (1927-1930) when the Bauhaus developed new curricula for architecture courses, and set new educational goals (i.e. integration of theory and practice, a rationalist view of design that led to a scientific approach, etc.) served by the introduction of new taught subjects (i.e. foundational courses in social theory, economics and psychology).\(^{193}\)

In this respect the ‘Bauhaus model’ was unique, and remained so until recently, in focusing on curriculum theory and on teaching-learning (i.e. adopting a problem-solving approach to design), by instigating in architectural education what much later (the 1980’s) educational theory would call ‘didacticisation’ of education policy. Moreover, teaching approaches in subsequent years (i.e. the re-establishment in students of the ‘innocent eye’, or the cleansing of their formal and aesthetic preconceptions) have their roots in the Bauhaus didactical and pedagogical ‘model’ (for example, in the theory of *Vorkurs* as the educational stage where students returned to a child-like state).


2.3.1 The Medieval Era, the Guild System and the Unity of Spheres

The medieval era is typified by secretive methods of transmitting architectural knowledge. The guild system dominated the production of architecture and the production and circulation of architectural knowledge, as well as architectural training. Such craft organizations emerged across Europe sporadically. In England craft guilds emerged in the twelfth century, approximately when the (corps de) métiers appeared in France, whereas in Germany the Zünfte (singular Zunft) had already appeared in the tenth century.

For most of this period, it was common that buildings were not attributed to individual masters or architects in contrast to the Renaissance era which is seen as the period of the great individualists. Therefore many individuals’ names remained unknown despite their prominence in the field. This started to change from 1250 onwards when the first building contracts were produced. This began to occur in the High Middle Ages in Britain (roughly, the eleventh to fifteenth century) when the medieval ‘architect’ was the master mason or carpenter, who drew plans and details that others would execute – but who was also not above copying or drawing inspiration from the work of others. As such an individual, one usually maintained an active role in carrying out the most artistic and skilled part of the work, while also supervising the execution of one’s own designs. Manuscripts from as early as the thirteenth century leave us in no doubt as to the fact that the master masons were men of high standing. The master mason (the individual with the most experience and expertise, or Magister lathomorum as it is described in contemporary documents) of the guild had to progress through a number of statuses from apprentice to journeyman to craftsman or mason, which would happen over a prolonged period. In England, an apprentice had to serve for seven years before becoming a mason, provided that an opportunity arose for patronage. Under the London regulation of 1356, the mason was then bound to produce four other masons of standing in order to verify his own ability. In a way this meant that the criterion for professional credibility became successfully teaching the next generation of craftsmen. The condition can be contrasted with today’s architectural education, where a sound criterion

194 The medieval period in Britain extends from the fifth century (the end of sub-Roman period) until the late fifteenth century (usually dated by the rise of what is often referred to as the English Renaissance in the reign of Henry VIII of England, and the Reformation in Scotland). The Early Middle Ages covers the fifth to the eleventh century, the High Middle Ages covers the eleventh to the fifteenth century and the Late Middle Ages is the fourteenth to the fifteenth century.


197 Ibid.

198 Ibid.
for teaching credibility is (very often) individual professional success. In other words, in the middle ages successful teaching became a prerequisite for higher professional status. What that means is that an individual’s professional success is likely to have been measured against collective benefit: one was acknowledged by the community (guild) as ‘good’ provided that one had successfully invested in the future of the community (collective) by teaching – by returning the knowledge and skills one has acquired over time to the collective community.

Overall, this period is marked by architecture and building work that was still being produced in a collective way. Buildings are not the expression of individual personality or the result of the ‘architect’s’ idiosyncrasy. As German sociologist Max Weber put it, in the pre-modern world the ends of individual action are given by socially unifying moral values. Moreover, in accordance with the spirit of the middle ages, the training of the next generation of craftsmen and master-craftsmen, or architects, heavily relied on one’s becoming attuned to a group and to the master’s authority. The guild system itself as a mode of organizing labour was partially characterised by elasticity and mobility, but was predominantly characterised by discipline and authoritarian organisation. Besides, its success as an ‘all-inclusive’ form of induction for ‘architects’, building adepts, and mystics, was ensured by characteristically medieval slow changes in knowledge bases.

Max Weber holds that one characteristic of the pre-modern societies of the Christian-feudal and the early Protestant epoch is a unitary world view. Within this world view there is one valid set of beliefs, values and meanings. Throughout the medieval era, values and meanings were articulated within an all-embracing belief system that described an ordered and unified cosmos – what constituted the medieval religious-cosmological world view. In this system, cognitive and normative categories were fused into a synthetic view of the world as cosmos. Valid beliefs, values and meanings were all embedded together in the social institutions and cultural life of the individuals in the system.

During this period, and practically up to the beginning of the Enlightenment movement, scientific knowledge, ethical and aesthetic values, politics and economics were indistinguishable domains. Art, science, politics and ethics all operated in tandem and were to be understood in relation to social and traditional values, something that had a profound effect on the profession-education relation (‘one became what one was born to become’).

200 Idem, pp.159-160
201 Ibid.
Hence, the different fields of the social enterprise, as we distinguish them now, were dominated by all-encompassing worldviews, derived from myths, religion or similarly traditional sources. Consequently, social claims to value or meaning had to be legitimized in terms of the dominant worldview. For instance, during the middle ages Catholic orthodoxy played the leading role in bestowing meaning on both art and science.

One could challenge this view, in which the middle ages is presented as a period of unified ‘spheres’, by arguing that since we can retrospectively distinguish between these different spheres of knowledge they must have existed as such (even if this wasn’t acknowledged by thinkers as the time). However, even though these spheres are given different names today, and despite the fact that they were treated as distinct fields by some medieval thinkers, it still remains the case that those active in these spheres had not yet developed their own independent logic. Furthermore, as we shall see, it is worth emphasising the importance of Aristotelian tradition to medieval thought.

It is worth noting that our perception of scientific, intellectual and philosophical activity in the medieval era changed during the twentieth century due to pioneering research. For instance, Lindberg explains that the Aristotelian tradition gained central stage in the twelfth and thirteenth centuries, gradually replacing the conception of the cosmos that was derived from Plato and thinkers in the early middle ages. Indeed, the Aristotelian world view ultimately came to displace the Platonic one. As such, it is important to note the significant points of divergence between the two. For example, a major issue was that of the homogeneity of the cosmic sphere, advocated by the Aristotelean picture. Such Aristotelian features merged with traditional cosmological beliefs and came to determine the essentials tenets of late medieval cosmology – a cosmology that became the shared intellectual property of educated Europeans during the thirteenth century. However, since such intellectuals were only a minority of the population of the time, it would not be accurate to suggest that these views represent the general atmosphere of the middle ages. Moreover, Lindberg claims that universal agreement of such magnitude emerged not because the educated felt compelled to yield to the authority of Aristotle but because his cosmological picture as a whole presented a persuasive and satisfying account of the world as they


205 Other Aristotelian contributions to the cosmological picture were the elaborate system of planetary spheres and the principles of causation that determined their relations with the terrestrial realm.
perceived it. In fact, medieval scholars either appeared critical and challenged certain elements of the Aristotelian cosmology, or attempted to fine-tune Aristotelian cosmology and bring it into harmony with biblical teachings and other sources of authority.

The persistent efforts of medieval scholars to falsify whatever did not conform to Catholic orthodoxy are also pointed out by Duhem. He suggests that these efforts led to philosophical discussions that, in turn, resulted in the substitution of new ideas for old ones. In this process, experience was not involved at all, rather than the dominating worldview that imposed restrictions on older ideas. Ultimately, this account of the state of medieval intellectualism, as outlined above, explains why education and work were inextricable insofar as manual labour and mental work remained mutually implicative.

### 2.3.2 Renaissance, or the Early Modern period

In the Middle Ages the notion of human completeness was identified with the salvation of the soul, with the reward of an eternity spent in heaven and dedication to the Devine Grace, so that no provision was taken to ensure happiness in the present world. Even in antiquity, the mathematical accuracy concerned the spheres of planets, leaving the mundane things to approaches of ‘approximately’ or ‘almost’. It was only in the mid-fifteenth century that a new value - the human as individual – emerged, along with a new approach to knowledge – the combination of rational accuracy and empirical facts. Hence, the dissolution of feudalism and the development of capitalism are associated with rationalistic and individualistic tendencies, which also account for the transition from the masons’ lodge to the guild workshop as the accepted framework of production in art.

The masons’ lodge as a way of organizing labour conformed with the demands of a period in which the main, if not the only, clients of the larger and most ambitious works were the Church and Municipalities (this was the case throughout Europe). New urban citizenry increased private demand and, as a result, craftsmen began to increasingly settle in cities, where they formed guilds as a form of self-government. This transition from the lodge to the

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206 For Lindberg, thinkers universally departed from Aristotle’s acknowledgment that the cosmos had a beginning in time, clinging to a literal interpretation of Genesis – although there were Aristotelians of the 13th century prepared to argue that this could not be established by philosophical argument.


208 As an example, Duhem emphasises the fourteenth century operations to overthrow the Aristotelian formulations of the principles of infinity in number, and infinity in magnitude. The belief in two dogmas (one was the dogma of personal immortality of human souls and the other was the dogma of the creative omnipotence of God), in contradiction to the Aristotelian formulations, led to the expression, discussion and formulation of new ideas, which paved the way for the creation of the infinitesimal calculus.
(more egalitarian) guild marked the beginning of an association between creators and products – which set the path towards our modern view of the profession.209

2.3.3 The Enlightenment

With the beginning of the Enlightenment movement, the influence of all-encompassing worldviews on the different fields of social enterprise came to an end. Central to reading the history of this period in this way is Max Weber’s conception of the ‘differentiation of spheres’210 which suggests that from the Enlightenment onwards, science, technology, law, morality and art all gained autonomy, each developing their own independent logics – that is, their own inherent meanings.211 Jürgen Habermas uses the notion of the ‘differentiation of spheres’ to explain modernity as a condition that emerged from the Enlightenment. Habermas stresses that modernity was determined by the condition of proliferation of independent logics in self-legitimizing (Selbstvergewisserung) value spheres.212

As a consequence, in modernity a framework of oppositional dualities developed. In contrast to what took place before the Enlightenment, mental work now came to be distinguished from manual labour, hence the idea of distinction between mind and body. This meant that, in most cases, buildings in the Enlightenment period were designed by the same people who would build them.213 At the same time, the period was also marked by the development of a multitude of routes of entry into the architectural profession, indicating that there was no specific form of education for architecture.214

As a result of the declining necessity of the guild as an educational system, education gradually came to be separated from professional work. In the case of buildings, from the end of the Enlightenment it is increasingly noticeable that they were designed by men who had no training in the building craft215. With the emergence of the modern professions during the Renaissance, the new forms of architectural education (as well as of the other professions), apprenticeship and pupillage, broke with those of the past: instruction became clearly separated from work. Despite the fact that they co-occurred in place and time with

209 Arnold Hauser, op. cit., pp.156-158.
214 Ibid.
215 Ibid.
work, apprentices engaged in receiving instruction rather than carrying out labour. What’s more, pupils would have to pay for instruction, rather than exchanging it for labour.

It is therefore fair to assume that changes during the Enlightenment movement were the basis for an increased tendency to separate architecture from its traditional craft foundations. It was no longer the case that architects were educated while working as members of a guild, and could not themselves operate as craftsmen. Over time, scientific knowledge (facts) would come to be distinguished from ethical and aesthetic values and from political economics. In the new conditions of ‘differentiation of spheres’, architecture followed art in becoming a transcendent autonomous practice, separated from politics and materialism. As such, it became an instrument with which the aristocracy could consolidate power. Tony Ward discusses how the shift from art-as-use-value to the art-as-exchange-value nurtured architectural achievements during the Renaissance which, in turn, resulted in a new category: ‘architecture-as-exchange-value’.217

In the new environment of colonial expansion, work opportunities for architects increased. Surplus capital was produced, initially for the Church, the traditional aristocracy, and later for the emerging merchant classes, and was excessively invested in buildings that would represent both ecclesiastical and secular power. As a result of the new economic conditions (monetary economy, increasing trade, etc.) that followed, the old established aristocracy (primarily feudal land owners) had to compete with an emerging bourgeoisie (new, merchant classes and professionals). The former, representing a ‘culture of taste’ had to compete with a new ‘culture of knowledge’ – the motto of the new meritocracy, the technology-orientated bourgeoisie.218

### 2.3.4 Post-Enlightenment

According to Ward, a new opposition between architecture-as-art and architecture-as-science was created.219 This ‘Enlightenment opposition’ is integral to (i) architecture and architectural theorizing and (ii) the social hierarchies that shaped and reproduced the architectural profession. In 1841, T. L. Donaldson, secretary of the RIBA, on his inauguration as professor of architecture at UCL gave two lectures: ‘Architecture as an art’ and ‘Architecture as a science’. He thus articulated the ideological dualism that pre-existed between the two competing cultural groups. Ever since, these have been seen as competing but – paradoxically – symbiotic theories in architectural design.

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216 Anthony Ward, in Thomas Dutton and Lian Hurst Mann, loc. cit.
217 Ibid.
218 Ibid.
219 Ibid.
Generally, for the Anglo-American professional system, the ‘natural mode’ of education has always been the system of apprenticeship (or articled pupillage) – an evolution from the medieval apprenticeship system. This has tended to be a self-controlling mechanism of reproduction, vested in the body of practitioners. The difference between the two forms was that while an apprentice of the medieval era exchanged his labour for instruction by a master, the articled pupil paid to be taught.

Pupillage was first adopted as a means of architectural education in a period of growth in the mid-eighteenth century. The aforementioned separation of mental from manual labour and the subsequent separation of education from work was borne out in the labour division in the domain of construction. Additionally, the separation of education from work brought about a change in the social backgrounds of those who studied architecture, and thus a change in the social backgrounds of architects more generally. Crinson and Lubbock state that in the seventeenth and early eighteenth centuries architects originated from a great variety of social strata, whereas in late eighteenth and nineteenth centuries the situation changed, with architects coming from primarily middle-class backgrounds. This change resulted in a rise of the social status of the architect, which brought about consequences such as the establishment of codes of professional practice and ethics. Likewise, building professions (surveyors, civil engineers, etc.) became separated and so too, accordingly, did their methods of training.

By 1800, almost half of architectural professionals were trained through pupillage, with the number rising very quickly in the following decades, displacing other points of entry into the occupation like the building trades. Architects with professional expertise trained pupils in offices specifically dedicated to architectural education. Knowledge acquired in these offices was often complemented by attending both informal and formal academies (more popular in the eighteenth century), as well a wider distribution and publication of architectural theory. Pupillage usually lasted five to six years and often included attendance at a local arts academy and, sometimes, foreign travel. A great rise in the number of pupillages resulted in increased specialization. Hence, a disturbance of the balance of the medieval and modern methods occurred – in effect, disturbing the balance between craft and design, to the benefit of design.

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220 Mark Crinson and Jules Lubbock, op. cit., p.36.
221 Idem
222 Garry Stevens, op. cit., p.174.
224 Mark Crinson and Jules Lubbock, op. cit., p.37.
This system of apprenticeship as a means of professional reproduction had advantages which, according to Stevens, were threefold:

(i) It allows for a greater control of the supply of new practitioners, and the ability to respond appropriately to the needs of the profession – in contrast, the school-based system ignores the requirements of the market and replaces them with its own criteria deriving from the school’s desire to maintain a constant flow of graduates.

(ii) The profession has direct control over what is to be learnt, having a better appreciation of particular skills from the market’s perspective – in contrast schools determine the field’s epistemology depending on the approach to architecture’s ontology that they individually adopt.

(iii) Apprenticeship is the system that best exploits the full weight of an individual’s cultural capital, has minimum effect in areas requiring formal academic certification and has maximum effect in un-bureaucratised areas of social space, where the state imposes no rules and makes no tests. As social capital can be more significantly mobilized by an individual from the upper classes than by someone from the lower social strata, it is not surprising that in the late nineteenth century (when the pupillage system was at its height in Britain) it was noted that English architectural apprentices came from higher strata than in Germany where architecture was taught in technical universities.

In 1768, the Royal Academy was formed, inspired to a degree by its French counterparts (one of its initiate founders, William Chambers, had studied in J. F. Blondel’s school of architecture in Paris), although it had neither the facilities nor the motivation to play the same role. The French academies were characterised by the provision of intense and inclusive instruction to train recruits for royal or military service. Nonetheless, the Royal Academy supplemented the training received in London offices. It only partly provided architectural education. Architectural students could attend lectures on perspective, and a course on the history and theory of architecture (6 public lectures annually), and make use of a library in evening hours. In addition to instructional objectives, the Academy also motivated students by awarding their drawings (the best accurate figured drawing of a

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225 Garry Stevens, op. cit., p.176.
London noted building, or the best original design, or in a set day a five-hour sketch exercise of a given subject) with silver and gold medals. Yet, Crinson and Lubbock claim that the institution should be seen as a supplement to the articled pupillage system, and not as a prototype for a national school of design pupillage. For its architects-founders:

it was intended to foster a combination of intellectual and practical accomplishment, the second of which was understood specifically as the ability to draw: an acceptable acquirement for the gentleman-architect, and one that was thought sufficient to encourage bonds of respect and clear communication with the building trades.\(^{227}\)

In the early nineteenth century, Oxford and Cambridge regarded the concept of vocational training as repugnant to the idea of a university and thus were content to leave the new professions to educate their own members. The new Universities only marginally supported integration of architectural education within their organisation. A few years after its foundation, the University of London (1826) had two professors of architecture who only gave occasional lectures to supplement pupillage rather than offering any sort of substantive education in the discipline.

In Britain, the profession’s maintenance was vested in the body of practitioners. In fact, professional associations, which are very strong in Britain, have always been responsible for the maintenance of the architectural profession. Founded in 1834, the Royal Institute of British Architects (RIBA) obtained the role of overseeing the educational sector, and progressively became the supreme controlling authority of the architectural profession and architectural education.

The period of the architectural profession that extends from beginning of the nineteenth century up to the late 1950s is known as the ‘first paradigm’. Its features include the development of primarily small-scale private architectural practices with relatively high visibility in the building market, and the institutionalization of the profession by RIBA and its increased control by means of qualification examinations and membership requirements. This period of architectural education is characterised by the co-existence of pupillage and (an increasing number of) university courses, always under the control of RIBA. The British system of professional education, consistently dominated by practitioners, is implemented in schools which are not necessarily associated with universities. It is noteworthy that professions such as law or accounting, until recently, conducted most of their training outside universities. On the other hand, even recently, architectural education has been predominantly housed by universities over whom RIBA preside. It is characteristic that in

\(^{227}\) Mark Crinson and Jules Lubbock, op. cit., p.36.
Britain, the profession developed out of associations of people doing the same work rather than out of people with similar state-certified qualifications, as was the case in countries like Germany and France.

While a system of state certification was absent in Britain (unlike France and Germany), the certification of competence for new architects was provided on a de facto basis by the competitive system of the design selection. In nineteenth-century Britain, winning a competition after a few years in pupillage was a rite of passage for new architects.  

The first school in Britain to offer a structured instructive programme was the Architectural Association (AA), founded in 1847 by discontented architectural assistants. The AA, not associated with the newly established University of London (University College London created the first chair of architecture in 1841), began to offer a full-time four-year course of evening classes in 1889. Day classes were first offered in 1901. The AA has remained unattached to universities up to this day, while nonetheless maintaining a reputation for excellence and innovation (and avant-garde elitism).

Only a few years later, the first architectural schools housed in universities came into being. One was at King’s College within the University of London. The Engineering department had opened in 1838 and was expanded in 1840, at which point teaching in Architecture was added to the syllabus. On the basis of that course, the Division of Architecture and Building Construction emerged in 1886, which became University College in 1913. Another school was developed at the University of Liverpool, established by royal charter in 1903, following the dissolution of the Victoria University. More schools followed after the turn of century.

The system of articled pupillage declined as more schools were founded. Until the 1920's most architecture students underwent some sort of comprehensive formal training, although only a few progressed to the later stages of academia. During that period, the study of architecture in architectural schools (pioneered by the AA and the Liverpool University School of architecture) evolved into a five-year full-time study course, leading to a BArch

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228 Garry Stevens, op. cit., p174.
229 Garry Stevens, op. cit., p176.
degree for matriculated students, and to a Diploma in Architecture for non-matriculated students. Generally, the educational paradigm adopted by British architectural schools in universities was a British form of the Beaux-Arts (increasingly so after the First World War). At the 1924 International Congress on Architectural Education, held in London, it was noted that the pupillage system, although it had practically vanished in most highly populated areas, still existed in certain localities as a result of a lack of available instructed courses.

Prior to the 1931 Architects’ Registration Act, anyone could be named an architect, although RIBA established examinations for associate membership as early as 1880’s. In general, though, schools worked to ensure that their students would pass these examinations. The RIBA granted partial exemption to Liverpool University a decade after its foundation (in 1903) and gradually granted full exemption to the other new schools beginning in the 1920’s. It also set up visiting boards to monitor schools and, as a result of the Registration Act, RIBA finally obtained de facto control over the licensing of individuals and accreditation of schools. Up until 1943, the Special Committee on Architectural Education was still concerned by the decline in pupillages and apprenticeships and encouraged RIBA to maintain its system of (external) qualifying examinations for those still not trained in ‘Recognised Schools’. By 1957, although pupillages continued to decline in number, students taking the external examination continued to increase.

In 1958, the first important discussion about U.K. architectural education since the war took place as part of the Oxford Conference. The proposed call to move education to universities dominated the discussion. By that time, about 63% of all architecture students were at polytechnics or art schools, only 22% in universities and 15% were exerting to proceed through architectural offices. The figures concerning the UK, presented in the Oxford Conference on Architectural Education, referenced 21 Recognised Schools, 5 Intermediate Schools, 9 Listed Schools, 32 Facility Schools and a number of other institutions offering courses in architecture. The entry requirements, standards achieved, and quality of instruction differed extensively amongst schools.


233 The 1958 Conference on architectural education, Chairman’s Report by Sir Leslie Martin. [Retrieved 11.01.2009].

234 Ibid.

235 Mark Crinson and Jules Lubbock, loc. cit.

236 RIBA Conference on Architectural Education of 1958 – Report by the Chairman, Sir Leslie Martin. [Retrieved 11.01.2009].
By 1962 all programmes of architecture were required to be five-year programmes of study, (known as RIBA, parts 1 and 2) in conjunction with practical training at an architectural office for a minimum of a further two years, leading to a final licensing examination (RIBA, part 3). Throughout the 1960s and into the 1970s, schools of architecture restructured their ‘monolithic’ five-year courses, towards an integrated combination of studies and practice – known by the shorthand description of ‘3+2’. 237 Throughout this period, practitioners still dominated the education system, through RIBA and the British association of practitioners. 238

2.3.5 The Official System

The educational paradigm to which all architecture schools subscribed immediately after the First World War was a British form of the Beaux-Arts. The École des Beaux-Arts model was a formal approach to organising architectural education with an emphasis on a specific curriculum. A key element of this model was integrating different knowledge domains - which at that point were limited to various forms of artistic expression, such as sculpture and painting – from an extensive catalogue of the norms of Neo-Classicism, into architecture (the endeavour was later broadened to form the Bauhaus model). However, the Beaux-Arts model did not seem to account for modern developments, or fit the reality of modern life, which explains its subsequent failure. As it turned out, it could not meet the requirements of the post-war (WWII) regeneration of Britain – and broke down just a few years after its inception.

With the emergence of a new phase in the evolution of the architectural profession in Britain, a new paradigm was established in architectural schools (maintained by RIBA) and amongst a group of educationalists, bureaucrats and architects: the modernist Official System. 239 In comparison to the original paradigm, professional activity gravitated from private practice to a public sector salaried service. The Architect-Planner oversaw the whole building-environment enterprise which aimed at total penetration into the building market. 240

In education, the paradigm became popular as it appeared to respond to the deficiencies of older paradigms by focusing on certain technological, artistic and sociological concerns within the new academic framework and by developing a centralized system for the subject of architecture. Operating within this paradigm, architects could

237 Terence Russel, loc. cit.
238 For a short period RIBA was in partnership with the Architects Registration Board under the JVP scheme (Joint Validation Panel).
240 Idem, pp180-183.
legitimately approach their field like scientists and adopt a research-based and problem-solving approach to architecture. Architects developed this new model by defining the paradigmatic activity of the architect as that of design, successfully separating the profession from the world of construction – a separation enhanced by the increasingly greater distinction between architectural education (where discourse on architecture develops) and the loci of practice and construction.

In architectural education, establishing this paradigm was only fully possible via a generational change amongst the most influential educationalists. The Official System depicted architectural education as a process of preparing the student for membership in a particular professional, architectural community. Crinson and Lubbock identify its highest period of influence on education as between 1960’s and 1970’s.

The Official System, once it was acknowledged as a legitimate paradigm, adopted certain rules, methods and principles that were not learnt abstractly but were demonstrated in the process of learning design, guided by the discretion of individual tutors. During its period of high influence students were discouraged from producing anything ‘so banal as an architectural design for their projects’ and were expected to produce written reports instead. The nineteenth century tendency to distance architectural design from the act of building, often in an attempt to gain high professional status, could be compared with the Official System’s attempts to distance the architect from the drawing board activity of architectural design.

Stimulated by post-WWII regeneration conditions in Britain, the expansion of building activity was primarily driven by the welfare-state and was associated with economic policies that had the public sector at their heart (implemented by labour governments). We can identify at least two reasons for these pressures to overturn this established condition, and hence, the Official paradigm. The first was that this large (both in quantity and scale) design task of the huge building capital throughout the entire country was handled by salaried architects, and thus an element of alienation came into play. Architects had to deal with numerous design problems and choices on behalf of unknown users, with whom they could not identify. Moreover, end-users (tenants and so on) of architecture would find themselves alienated from the architectural features they were originally offered. Planners in large-scale projects may have been distanced from the real issues that a design problem alluded to and hence unable to identify with local or individual needs. Additionally, the nature (that is, the functional concept and formal character) of modernist architecture along

241 Ibid.
242 Mark Crinson and Jules Lubbock, op. cit., p158.
with its progressive degeneration resulted in negative perceptions by the public. The Official modernist paradigm had become tied to economic policies. Therefore, in the early 80s, as socialist policies in Britain were overthrown and the rise of neo-liberalism with its economic policies brought about the collapse of the modernist paradigm, it brought about the elimination or silencing of any discussions about architecture as a collective operation.\textsuperscript{243}

### 2.3.6 After the Official System

A more recent change in architectural education (that has been noted in scholarship) took place between the mid-80s and the mid-90s. Two exemplary publications have documented this change:\textsuperscript{244} (i) ‘The education of the architect’ by Cooper Union in 1988 NY, and (ii) the 1985-1995 Year Books of the Architectural Association, London. This transformation in architectural education consists in a shift of emphasis from the end-product of student-work to the process of developing it – one that might or might not lead to an architectural product.\textsuperscript{245} Thus, the objective of the educational paradigm became the design as a process, whereas before it was the design as outcome.

By 1981, Robin Evans\textsuperscript{246} had already predicted that the means of (design) representation would take on a new role, as new explorative attitudes could allow the designer’s perception to flow in different channels. It should be noted that this emphasis on ‘process’ epitomises a sense of creativity, whether successful or unsuccessful, and novelty (original creativity). In contrast, there is no observable emphasis on the learning process per se that takes place amongst architectural students.

It is also fair to assume that ‘process’ refers to the design end-product: to talk of ‘process’ is to have an end in mind, even if the ‘end’ is simply what can be gained from the process. This is true, even if the features of the ‘process’ have now been expanded, magnified, emphasized and become ‘end-products’ themselves. The broader philosophical context in which this shift in architectural education of the 80s and 90s took place is that of deconstruction. Those who emphasise the influence of deconstruction on architecture claim that it offered a radical alternative to more limited views of architecture. For Linda Groat,\textsuperscript{247} the Anglo-American fascination with deconstruction exemplified the constant need to marry

\textsuperscript{243} Overtime, these new conditions may have gradually re-introduced the need for a new social architecture, or the field of action of a socialist post-modernism in the form of attempts to reconnect with community.

\textsuperscript{244} Nelly Marda, Architectural concept formation: transmission of knowledge in the design studio in relation to teaching methods (Doctoral dissertation). University of London, 1996.

\textsuperscript{245} Ibid.


\textsuperscript{247} Linda Groat, Rescuing architecture form Cul-de-Sac, \textit{JAE} 45(3), May 1992, pp.138-145.
an apparently acceptable ‘empirical’ method to an epistemological stance that affirmed the value of the creative self.

Deconstructivism in architecture claimed to be a ‘way of working’ rather than a style, and as such it transformed architectural education. Two of its most influential theorists are Peter Eisenman and Bernard Tschumi who, borrowing from deconstruction (the philosophy of Jacques Derrida), in their writings and studio teaching, became catalysts for transformation in the studio.\textsuperscript{248} Eisenman, with the introduction of decomposition as a method for designing, aimed at freeing the architect from the conditions imposed on them by the process of composition. He claims that, ‘the house is not an object in the traditional sense - that is the end result of a process - but more accurately a record of a process’. Tschumi on the other hand, introduced new approaches to architecture by adopting extra-architectural tactics and working in medium such as texts, cinema, and cinematic reading.

The problem [we face now is] choosing between an anachronistic continuance of hope and an acceptance of the bare conditions of survival....Incapable of believing in reason, uncertain of the significance of his objects, man [has lost] his capacity for signifying....The context which gave ideas and objects their previous significance is gone....The [modernist proposal of the] ‘death of art’ no longer offers a polemical possibility, because the former meaning of art no longer obtains. There is now merely a landscape of objects; new and old are the same; they appear to have meaning but they speak into a void of history. The realization of this void, at once cataclysmic and claustrophobic, demands that past, present, and future be reconfigured. To have meaning, both object and life must acknowledge and symbolize this new reality.\textsuperscript{249}

Eisenman criticises modernism for relying upon misconceived notions of function and universal emancipation. He also accuses Venturi’s post-modern approach of merely substituting the previous form of representation – functionalism - with a new one - historicism.

Coming from a background of critical theory, Ward\textsuperscript{250} sees Eisenman as having introduced a revolutionary theory with transformative potential – one which promises to undermine established aesthetic norms. In contrast to the modernist attempt at replacing architectural meanings which are associated with a privileged class with another set of classless meanings, Eisenman proposes an approach to architecture that is itself meaningless.

\textsuperscript{248} Nelly Marda, op. cit., p.62.
\textsuperscript{250} Anthony Ward in Thomas Dutton and Lian Hurst Mann, op. cit., p.54.
or open to indefinite meanings. For Eisenman, the process of design is a ritual cleansing of
pre-established meaning and, thus, an implicit critique of existing social structures. Eisenman claims that this approach avoids the trap awaiting most designers; of reproducing
the circumstances of their own social and cultural conditioning (the aim of modernist design
theories, which were based on notions of objectivity that Eisenman sets out to repudiate).
However, Ward criticizes deconstructivist theories for their central use of illusion, in
masking the role of the theories in continuing to reproduce the social structures of power and
privilege, of which Eisenman (and his colleagues) is the main beneficiary.

Deconstructivism promotes architecture as the (individualistic) production of formalist
icons, the effect of which is to perpetuate a system of authorship – even in spite of
postmodern theory that takes the problematisation of authorship as one of its foundational
premises. Hence, in Deconstructivism the built environment is stripped of its emancipatory
social power, as Ward suggests.

One of the major statements that Eisenman makes concerns architecture’s potential to
change culture. Consequently, he claims that art – and, by extension, architecture – aims at
shaping our perception of reality. His claim is that art and (deconstructivist) architecture
undermine our pre-conceptions about everyday experience in relation to mass, structure,
place and time. For instance, a building can challenge our preconceptions about the kinds of
aesthetic objects that we take to constitute art.

For Eisenman, the same approach to architecture addresses issues such de-
centralisation, the death of author, and the erasure of subjectivity. As Ward explains:

His intention is reputed to be to engage the displacement of subjectivity, the
fragmentation of life, the loss of moral certainty, the relativity of values, the
illusory aspect of history, and the unreliability of rationality.

In broader terms, the model of architecture that Eisenman proposes is one that repudiates
Enlightenment rationality and, hence, the veracity of science and logic. He proposes that
postmodern architecture, by embodying scientific rationality, ought to become an art that
contrasts with modern architecture. On these grounds, he claims that the artist (and by
extension, the architect) is an agent of social change. The architect-artist shifts public

251 Peter Eisenman, in Thomas Dutton and Lian Hurst Mann, op. cit., pp.40-42.
252 Philip Johnson, Mark Wigley and Museum of Modern Art. Deconstructivist Architecture. Boston: Little,
253 Ward cites Ghirardo for this: Diane Ghirardo, Eisenman’s Bogus Avant-Gard, Progressive Architecture, 75(11)
November 1994, 70.
254 Anthony Ward, in Thomas Dutton and Lian Hurst Mann, loc. cit.
255 This operation is exemplified in his design of the Wexner Center for the Visual Arts at Ohio State University
in Columbus, Ohio.
perception, transforms the way we collectively perceive ourselves as experiencing subjects by a variety of architectural devices, displaces our sense of verticality and horizontality, and, ultimately, strives for a more challenging kind of architecture.

Opposing claims come from a different area of postmodern discourse. For example, Ward analyses the strategy and tactics of deconstructivist design theory and architecture (taking Eisenman as an example). Essentially, he claims, it consists in the appropriation of the liberal ideas of postmodern critique and putting them to use for conservative ends. Ward does this primarily by means of contrasting the notion of difference as an ontological condition of certain invisible minorities within society with the same term as Eisenman uses it in his exegesis of the postmodern world. Ward suggests that difference and voice are lived realities for certain fractions of society, no less than oppression is. He refers to the marginalization and silencing of minorities based on race, gender, and class (‘not of some remote ‘natives’) by the dominant culture, which thereby undermines its own attempts at impartiality. While social-cultural boundaries are marked by difference – inseparably tied to cultural identity – the autonomous existence of these groups is at risk insofar as their social-cultural identity is in jeopardy. According to this critique, difference in Eisenman’s work is depersonalized and transformed into commodity to the service of the designers’ needs in their search for novelty ‘in the pursuit of the next commission in the bitterly competitive consumer economy’. Overall, the ‘vacuous’ and ‘formalist’ notion of difference, according to Ward, is used to justify the expression of the postmodern-day state of schizophrenia, in which stable categories of lived experiences are blurred, distinctions dissolve, and meaning floats unanchored, adrift.

Furthermore, it is claimed, such propositions do no more than universalize experience, merely presenting impartiality as universality and raising questions like ‘for whom is the world fragmentary and adrift?’ , ‘if life is meaningless, why search for its meaning?’ etc. For the proponent of deconstructivist architecture to assume the postmodern world is fragmentary, chaotic, schizophrenic and meaningless is ‘to place it conveniently beyond the range of meaning, to insulate it from critical interrogation that might reveal its structure of power and privilege’. Despite Eisenman’s attempt to render life meaningless, the deconstructivist approach to architecture (an example being the Wexner Center building) does have a meaning, which is to reframe the social as neutral (independent of power relationships), and also to demonstrate that something can be social without necessarily

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257 Ibid.
increasing the chances of social change. Further, it glosses over discrimination while at the
same time convincing professionals (architects) that all is well in the world and that social
change can happen without personal sacrifice (without crossing William Morris’s ‘river of
fire’). Finally, deconstructivist theories of design are intensive expressions of their
membership in the dominant cultural elite.

Ultimately, the architectural education paradigm’s change of objective involves
another shift. Previously, the end-product of architectural design was to be tested against
users’ criteria (needs, requirements, standards, programme, etc.), and it presupposed an
anthropological position. Post-change, however, the process was to be tested against the
individual student’s creative development and the creative process’s own presuppositions.
Hence, emphasis shifted from end-user of architecture to the creator-student – from a
recipient community to an individual’s (perhaps solitary) internal progress; from the
environmental context of architectural work to the individual needs of the designer. The
tendency to focus on enhancing the development of the individual self, to foster individual
identities, was not an accidental consequence of the protective ‘green-house’ of
postmodernism.

2.4 A History of the Discourse on Architectural Education in Britain

Architect and sociologist Garry Stevens suggests that until the middle to late
nineteenth century, intellectual discourse about the production of architecture and its
education took place primarily amongst ‘free-floating’ intellectuals. Intellectual life at that
time, both in Britain and America, took place mostly outside universities: although
intellectuals (the ‘intelligentsia’) were educated in elite universities, they were not employed
by them. Instead they were more likely to be found amongst the leisured aristocracy, the
bourgeoisie and elite members of the professions.

Since, during this period, reproduction of the field was trusted to professionals (for
example, pupils were trained by professionals), who were also responsible for the production
of architecture itself, discourse about architecture tended to come from outside education.
The continuous debate about architectural quality was conducted through the writing of
articles for the cultural press, a few architectural journals, books, discussions at meetings of

259 Garry Stevens, loc. cit.
260 Thomas Bender, The Erosion of Public Culture: Cities, Discourses and Professional Disciplines, in The
Authority of Experts, ed. T.L. Haskell, Bloomington: Indiana University Press 1994, pp.84-106, as cited in:
Garry Stevens, loc. cit.
the RIBA, or personal communication between architects and critics. As a result, discourse surrounding architectural education continued to be steered by those outside education.

The 1924 Congress on Architectural Education was principally concerned with the country’s system of education rather than with theoretical (i.e. ontological-epistemological) questions about educating architects. The issue of the coexistence of training systems (alongside other means of architectural training) was discussed in connection to RIBA’s system of qualifying examinations – more specifically the coexistence of full-time courses offered in universities alongside the remaining pupillage systems. The same administrative issues were dealt with in the 1943 Report of the Special Committee on Architectural Education.

It is possible that during the 1958 Oxford Congress on Architectural Education the theoretical foundations of educational discourse were set for the first time. Reference was made to issues such as quality of instruction, educational standards achieved in various institutions, standards of entry into education, as well the aims and objectives of training. Content of training and curriculum were discussed although not in great detail. In addition, the different types of school (University School, Independent School and Local Authority School) were discussed in relation to the above parameters.

In addition, the relations between an architectural school and other faculties within universities were also addressed. This discussion involved only a limited number of ontological and epistemological enquiries but these included; the kind of knowledge that architecture entails, its theory as guide and knowledge developer, and its research as theory promoter. Finally, its relationships with the neighbouring disciplines in other university faculties were discussed with the wider issue of architecture’s place within the university in mind. It’s worth noting that this discourse entailed having to address certain ontological propositions. One instance of this was the development of architecture as a public service with a particular emphasis on what was publicly expected of the architect.

In epistemological terms, discussions addressed the meaning of knowledge in relation to the domain of design, its role in architectural imagination, as well as the possible inadequacy of certain kind(s) of knowledge for the creative process of design. Generalised knowledge of practice was distinguished from specialised knowledge and what ensued was an attempt to trace their respective cognitive roles. The broadening of architecture’s knowledge base is seen as a sine qua non condition for the advancement of both teaching and practice. The range of epistemological areas is meant to extend to areas such as daylighting, town planning, industrialization and prefabrication of building, tropical building, etc.
The role of research in advancing architectural knowledge and the importance of embedding it in post-graduate study programmes was generally accepted. Concomitantly, the interdisciplinary nature of architectural knowledge acquisition was emphasised. Fields such as sociology, psychology, physics and physiology along with structural and mechanical engineering and management were all listed as possible inter-disciplinary fields for architecture. However, it was observed that architecture, as it is employed as a research activity, is limited primarily to historical research.

In relation to the educational process, it was assumed that knowledge has to be approached pragmatically and suggestions were made as to how students can be involved in building projects, by either the introduction of the ‘live project’ in the educational process (pioneered in the Birmingham School of Architecture and already in operation in RWA School of Architecture at Bristol, and at the University of Cambridge School of Architecture), or the structured alternation of training in school and training practice in an office – what was called a ‘sandwich course’. Discussion even covered the adequate age of entry into architectural education in relation to optimum knowledge absorption and cognitive maturity. Developments in training, supposedly in terms of content and method, were also considered.

As we saw earlier, the architectural profession in the UK is traditionally an institutionalized one. Architectural education is thus usually seen as a field for which professionals are responsible. Therefore, it was stressed that there was a lack of any clear indication (at that time) of what is required from the different types of schools by the profession in terms of standard of knowledge.261

A clear lead must come from the profession. It must not only give a lead. It must play its part in architectural education. It can do this in several ways…first staffing…second…

Two marginal remarks stand out from the documentation of the 1958 Congress. The first is that education is constantly referred to as ‘training’ despite the position of architecture in universities. This choice of words falls with the scope of the philosophy of education. The second is masculinisation: throughout this discussion, it is implicit that the architect, either as a student or professional, is meant to be male.

Overall, it is evident that architectural education during this period is discussed primarily at the level of knowledge: new knowledge, raised standards of knowledge, wider knowledge bases. Enquiry does not engage at all with methods of teaching, or the

mechanisms of learning in architecture. When ‘means of education’ are mentioned, the term centres on types of school and objectives of training, and is always tied to a profession framework. The development of post-graduate study is discussed as a key-step towards the advancement and re-invigoration of architecture’s teaching, the intention being to raise the standards of practice. But an ontology of architecture – the normative meanings that we attribute to terms such as ‘design’ or ‘architecture’ – inevitably relates to architecture’s epistemology – *what* is to be learnt and *how*. In other words, the ontology of architecture affects the epistemology thereof – that is, architectural education. It is in this respect that the profession cannot help but have an impact on education.

### 2.5 A history of Architectural Didactics

We can view established teaching approaches in architecture as *de facto* constituting its didactics. It has been noted that, in discussions surrounding architectural education, we mainly refer to teaching approaches in the design studio. This was observed in the comprehensive study of the teaching methods authored by Nelly Marda.\(^{262}\) As a general claim, Marda suggests that it is an obvious fact that a model teaching approach equates to the most suitable (consequently, the dominant) design method is to be taught: a design method is conceived of first and is then taught. Consequently, teaching design is not distinct from design itself.

Throughout the twentieth century, two distinct approaches have co-existed: the visual and the rational. The visual approach has an intuitive, creative, abstract character: it is focused on the visual expression of design. The rational approach is deterministic, intellectual and functional in character, focusing on ‘intellectual’ design rules. In the recent history of teaching architecture, between the two approaches, the rational has tended to be seen dominant.

At the beginning of the twentieth century, the Beaux Arts paradigm was still popular and teaching in architecture was approached either through composition or through typology. For composition, the use of ‘universal’ rational rules could be applied to design projects. During the period between 1900 and the 1930’s, composition took on the role of a set of abstract rules aimed at directing someone in the process of design. Composition was susceptible to analysis and guided by a set of ground rules. The compositional teaching method was interactive and students operated on both mental and visual levels. Typology on the other hand, based on previous analysis, was concerned with teaching analysis.

\(^{262}\) Nelly Marda, loc. cit.
Additionally, typology, in conjunction with analytical rules, offered the choice of ‘doing’ by imitation.

With the rise of the modernist movement there was a noticeable rejection of explicit design teaching methods. The new doctrine’s approach to design was through free intuition. Therefore, imitating types or working under the rules of composition were seen as undesirable since they restrict the free process of design. Marda concludes that inherent in the teaching approaches of the modernist movement there is a contradiction: (i) the approach is creative, intuitive, and abstract, as in the Bauhaus, where formal rules are dominant and the approach is predominantly visual, and (ii) the approach is rational and deterministic, as in functionalism and its underlying belief in biotechnical determinism. The design process is implicit in these features of this approach.

What’s more, the modernist movement was affected by its engagement with functionalism, as Marda explains. Functionalism is not the product of a single cultural movement or of a single philosophy. It applies biological and mechanical standards to architecture. The premises of the biological analogy were: (a) nature is beautiful and perfect, (b) the forms of the designed objects are conceived as being wholly products of their environment – of the functional context in which testing and selection acts. Hence, the dictum ‘form follows function’ became a scientific assertion of causality: form emerges as a necessary and unique consequence of function. Respectively, the premises of the mechanical analogy were: (a) beauty (the formal perfection) results from the perfect mechanical efficiency, (b) perfected machines are a source of inspiration for architects, and (c) ‘a House is a machine for living in’. Overall, function is interpreted in a rational and mechanical way.

For modernist architects, function was susceptible to analysis and could be quantifiable (hence the intellectualization of the design process), and the teaching approach could be examined accordingly. At the level of cognition, the functionalist doctrine was represented by the analysis-synthesis model: first, we analyse the functional-technical requirements and then we synthesize new forms (more importantly) in a visual void. This last point is critical in the development of the teaching methods repertoire, which lack formal and visual operations (that is, they exist ‘in a visual void’). Marda emphasises that it is precisely this absence that was responsible for the lack of a clear teaching method during the modernist movement. Conversely, analytical approaches operate mainly at the visual level. They aim at offering to the student a tool of formal analysis that will shape their knowledge base and thus inform their own propositions.

In the late 1990s (subsequent to Marda’s research), teaching in the studio involved both intellectual and visual approaches, in contrast with the previous period when ‘learning
by doing’ and ‘learning by thinking’ were not valued equally. This balanced approach has been ignored in architectural education because it was perceived as relating to art more than to architecture – the only exceptions being the Bauhaus ‘Vorkurs’ and the Russian constructivist model.

A student’s elaborate course of actions in design consists of work with (a) precedents, (b) metaphors and (c) processes. During the period between 1985 and 1995 one could observe the use and re-creation of precedents by different techniques in design studio: for example, overlaying transparencies, juxtapositions, reversal, shifting rotation, decomposition, re-composition, etc. Objects like musical instruments, machines, medicine, music, etc., could be used metaphorically: for example, to express spatial qualities or spatial proposals. Lastly, the types of process used included mapping of body movements and communicative devices, often with the use of photographs and films. Generally, the approach was about displacement, simultaneous reading, multiple reading, re-framing and re-viewing, the intention being to generate new imaginative possibilities.

During the Post-modernist period, structuralism introduced semiotic approaches and the duality of signifier-signified became an essential vehicle for design in typology. At the same time, phenomenology introduced the ideal of the artistic poesis. In the 1990’s, meta-structuralist thought, influenced by the works of Foucault, Lacan, and Althusser, appears to have liberated architectural didactics from the restraints of privileged methodological fields. This condition legitimated almost anything as a vehicle for inspiration and design in architectural synthesis. Today we may experience the symbiosis of every methodological approach in a chaotic and yet nonetheless promising conflicting coexistence.

It becomes evident, diachronically, that the didactic approach in the design studio remains the most suitable design method, in the absence of any theoretical approach to teaching or learning. That is because teaching is not organized according to a theory of teaching or learning but in relation to particular design approaches (or, alternatively, design theories) that the instructor adopts.

This a-theoretical feature of architectural education has attracted criticisms which in many cases are grounded in elements of theoretical didactics. Some such criticisms focus on teaching methods, while others are derived from the point of view of design methods or the teacher-student relationship. For instance, Salvestrini criticises the trial and error method as a problematic approach to introductory design education, because it legitimises the void.

263 Micha Bandini, loc. cit.
surrounding what design is and how one designs in teaching, and allows teachers to refrain from clarifying their approach. Moreover, Delage and Marda\textsuperscript{265} criticise the current design teaching method in the introductory design studio for its failure to alter the preconceptions of beginners. Webster\textsuperscript{266} has undertaken ethnographic research evidencing that design tutors, who for the most part lack a background in educational theory, act in an ‘intuitive’ way and justify their teaching as such, oftentimes approaching students in an authoritative or hegemonic way.

Alternatively, Özkan\textsuperscript{267} associates architectural education with architectural theory. According to this line of thought, structured sets of values are determined by elite tastes of the time, which are then imposed onto the profession as theory. This imposition usually involved a strong ethical component, essentially determining what was good from what was to be avoided. Rather than being a theory framed in terms of scientific objectivity, these ethical propositions turned out to be the codes and practices that define architectural expression of buildings. It is noted that the only area where scientifically determined knowledge is utilized is in the technology and materials employed in architecture (in terms of environmental response, energy consumption, etc.). The same issues determine the way that architectural education is programmed. Özkan claims that what is actually learned by various means (implicitly or explicitly, directly or indirectly) is a codification of rights and wrongs in terms of a dominant architectural ‘theory’. Paradoxically, even in post-modernity, with all its characteristic tendencies to subvert modernist commitments to monolithic and universal truth (with respect to cultural diversity and others, in the uniqueness of human existence, in the value of otherness, in minority voices, etc. and in education with new principles, less authoritative, etc.), theory and education are still concerned with superimposed values that validate practice as accepted, successful and as right or wrong. Students learn to conform to dominant practices in order to succeed professionally, at a time when notions such as ‘success’ and ‘happiness’ are deified in a total silencing of any questioning of meanings and values. In the most extreme cases, pre-constructed answers to unuttered questions appear to be the main provision of mainstream architectural education. In such cases, the chance to deal with open questions or to nurture an endless and yet productive dialogue seems most distant.

\textsuperscript{267} Suha Özkan, loc. cit.
It should be clear now that architectural education is subject to changes in values, in connection with respective socio-cultural settings. As Özkan states, the question as to whether architectural education requires an educational theory of teaching and learning is independent of the synchronic valid architectural theory. Moreover, the question remains whether this would enable architectural education to overcome its basic philosophical dilemma ‘how can A and non-A coexist’. Another question worth examining is: would architectural education be better and more essential if we focused on the teaching of how (how to learn or how to ask appropriate questions) rather than the teaching of what (what is valid to learn) as we used to?
Chapter 3
Re-orienting the discussion: from Pedagogy to Didactics

Didactics and Pedagogy in educational theory
Prolegomena to a didactics of architecture – the argument
Didactic Tools in architectural education
The issue of ‘is’ and ‘ought’ derivation, or: what pedagogies for which tools?
3.1 Introduction

A necessary prerequisite for theoretically addressing issues of architectural education is the clarification of basic concepts used in its current debate. Indeed, the indiscriminate use of the terms pedagogy and didactics has become a serious source of confusion in discussions about architectural education. This thesis argues for the need to distinguish between architectural pedagogies and the didactics of architecture. In this respect, it does so within the discussions between the normative character of pedagogical propositions (what should be) and the descriptive or scientific grounding (what is) of didactics. In the course of this thesis, this distinction enables, on one hand the emergence of essential questions about the field from a clarified debate on architectural education and on the other, an enquiry into the appropriate terms for educational tools such as the studio project and the live project.

Pedagogies always imply evaluative and normative theories as they embody intentions and interests tied to historical, cultural, and socio-political contingencies.268 Architectural pedagogy is not an exception: its programmes, like any other educational design, are predicated upon value assumptions, and ultimately choices, about the nature of human beings, and the value of specific forms of content, as well as learning opportunities for students.

In the current debate over architectural education the questions are primarily of a pedagogical nature: is it about developing the architectural student’s individual expressiveness, or is it a process of coming to terms with society and the environment, and even, developing a ‘world’ citizenry? Is it constituted through a process of unifying the fragmented areas of knowledge and interpretations of reality into an articulated and meaningful whole, or is it about the instrumental acquisition of professional mastery? On the other hand, the quest for adequate forms of instruction would constitute architecture’s specific didactics. This chapter follows and develops the argument that we need to shift our focus from pedagogy to the didactics of architecture, in order to balance pedagogy-dominated explanations in architectural education. Furthermore, it develops the argument that architecture is in need of its own, specific didactics.

Self-reflection and dialogue with colleagues constitutes a theoretical form of didactics, yet not one of a scientific nature. Predominant methodological approaches to teaching are based on previous experience, in a self-perpetuating proposition, and they do

not seem to take into account developing recent findings in the discipline of education. This is observed in the gap between a (potentially) theoretical form of didactics in architectural design and contemporary theories of learning and teaching as, for instance, well-built links into the cognitive science approach of design. Literature makes it apparent that the didactics of architecture has evolved over time, drawing occasionally – and often unconsciously – from concurrent theories of education and broader philosophical schools of thought. However, as the educators of architecture are practicing their teaching, just by seeking answers to an array of emerging didactic issues that they are facing, they are essentially making connections with theories of education.

One issue is the question of subject matter in architectural design education and the appropriate degree of its organisation: is there a need for a concrete subject matter, based on which the educator will teach in the design studio? And further, to what degree can the subject matter be (pre)organised by the educator? Knowledge in traditional education tended to be contemptuous of present lived experience, and therefore could be suitably (pre)organized before being ‘administered’ to the students, rather than being constituted in situ with them. In reaction, progressive education gradually became dogmatically disapproving of any organisation of the subject matter.

The condition of architectural education has followed a similar trajectory. From modernity onwards, we witness a dearth of teaching methods to the extent that a subject matter for the architectural studio would refer simply to a knowledge-body of architectural types and/or rules of composition. Ultimately, there emerges the question of whether architectural education has been deprived of active efforts towards the organisation of ideas and facts.

Another issue that has preoccupied education is the educator’s choice between improvisation and structured teaching. In other words, the issue for architectural education becomes the appropriateness of the liberal or the interventionist role of the design instructor. Improvisation would prevent teaching and learning from becoming stereotyped and would

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270 At this point of the thesis the term ‘traditional education’ is vaguely defined; it can generally mean the dominant form before the progressive education being introduced at the beginning of the twentieth century. Generally the term may refer to: teacher-centred and teacher-directed, authoritative form of education, relying exclusively on the transmission of universal, Eurocentric knowledge, privileging universal, standardized learning outcomes that prescribe the same for all students, irrespective of their social location and other specific contexts such as class, culture, race, gender, etc.
271 In the initial, Dewean terms.
also provide fresh views in teaching, and is therefore a positive attribute. However, this may mean that the selection and organisation of content of subject matter could take place in a cursory manner. Thus arises the question of the degree to which the teacher can intervene in the studio’s dynamic and in the individual student’s learning process. Under what terms can the teacher make suggestions to students without manipulating their learning?

From another point of view we must consider the possibility of opting either for impulsive or meta-cognitive learning. In architecture, impulse and desire are often the starting point for conception, synthesis and creation. The issue here becomes whether learning can be deep and foundational for the development of future learning – especially when it relies exclusively upon impulse and the ‘first act’. If intellectual development is to take place, what would be the impact of reconstruction and the remaking of impulse and desire – of ‘stop and think’? Read within this context, could inhibition of impulse in its first state constitute a meta-cognitive or alternative approach to learning in architectural design? Under what terms could this happen?

The meaning and the nature of freedom in the teaching-learning development in the creative process is another issue. Is such initial planning and control within teaching against the freedom of the subject?

Finally, the issue of orientation of the teaching towards the past or the future remains in architecture as it is open in education overall. While in traditional education knowledge had little to do with the living present and more to do with a (previously proven) usefulness, progressive education was taken largely to ignore the past. In architectural design education we observe a respective ambiguity in ideas and approaches on this matter. What would it mean to orient the objectives of education only towards the future when the present experience cannot be stretched equally to the past?

3.2 Distinguishing didactics from pedagogy

In expressions such as ‘didactics of architecture’, ‘didactical tools in architectural education’ etc., the use of the term didactic in the place of the term instructional is the result of a lexical, or more precisely, terminological choice. At the same time, the adoption of the term didactics in the place of the term pedagogy is the result of a conceptual distinction. Moreover, despite an awareness of the negative connotations of the word didactics (didactic), which in English implies the formalist educationalist practices that combine dogma with dullness, this thesis argues for the necessity of the choice. In the following, I attempt to further validate this choice through a clarification of conceptions about didactics and
pedagogy as they developed in continental European educational discourse, and by providing definitions in addition to an etymological approach.

Didactics and pedagogy are the two major channels for reflection on education. Although both fields operate in the same discourses and use common epistemological tools, each one is a distinct field of educational research.²⁷³ In modern European languages, ‘didactic’ and its cognates have long been connected to the concept of teaching. The English terms didactics (n.) and didactic (adj.) are rendered from the French term didactique (adjective and noun) that names the field of research.²⁷⁴ The present-day forms came from the Greek root Διδακτικός < διδάσκω (didaktikos<didasko= to teach) through the Latin etymon didactica, which in turn entered more European languages after the sixteenth century.²⁷⁵ It should be noted that in English the noun didactics looks plural but functions grammatically as singular (as statistics, physics, mechanics, dynamics, statics, and other nouns in English). It designates the different subject didactics. In singular it is used as an adjective (i.e. didactic approach, didactic tools, etc.).

The meaning of the word ‘pedagogy’ (pédagogie), on the other hand, is connected to the word ‘child’. Etymologically it has its roots in Greek:

péd- pédo- ← παίζ<παιδί, (= child.) and –agogue ← αγαγείν<άγω (= the person who guides or makes something or someone come).

The pedagogue (pédagogue, παιδαγωγός) was literally the slave who led the child from home to school, and was also responsible for supervising the child’s homework.

Both didactics and pedagogy, as the two major currents for reflection in education, refer to the same reality. They constitute ways of investigating the processes of teaching and learning. Although both fields operate in the same territory and use common epistemological tools²⁷⁶ each one is a distinct field of educational research, and the degree of distinction differs across countries and educational traditions.

In the continental European languages, didactics is established as the name of a practical activity (the art of teaching alongside a practical knowledge in teaching), yet at the same time it is also a theoretical knowledge (scientific and non-scientific) about teaching, learning, and their conditions. Thus, the discipline of didactics unfolds in three main regions²⁷⁷: the what-region (concerned with the content of teaching), the how-region

²⁷⁶ Yves Bertrand and Jean Houssaye, op. cit., pp.33-51.
(concerned with the method of teaching) and the why-region (justifications of curricular choices). Didactics focuses on the individual (the learner) and their cognitive characteristics and functioning when she/he learns a given content and becomes a knowing subject. It takes the perspective of an educational reality that is drawing extensively from cognitive psychology and further from theory of teaching – although some researchers draw from social psychology. Didactics has its background in philosophy. The *Didactica Magna*, a seminal text by Johan Amos Comenius of 1657, can be seen as its major point of departure. The intent of didactics is to modify teaching practices and to promote their development, in order to provide the foundations for change in education. As a research field it investigates adequate forms of instruction (that is, how best can content be taught and learned – in what settings and by what means). Bertrand and Houssaye assert that it is by these features that didactics differentiates itself – even socially – from pedagogy.

*Pedagogy* (pédagogie), on the other hand, refers to the 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, their future role in society. It has its reference to philosophy of education, to educational sociology and further to theory of education. Pedagogy remains grounded in the political sciences. It connects with the philosophy of education through its educational goal-setting.

Expressing the viewpoint of the French didacticians, Bertrand and Houssaye specify that pedagogy is more general than didactics. Unlike pedagogy, didactics draws from psychology of learning, cognitive science, and philosophical theories, which rely upon attempts to understand reality rather than upon evaluations. Indeed, the relation of the two disciplines is often complicated and can be perceived as contradictory and confusing. By way of example, although it is rare to find a specific form of didactics that relates to social problem solving and socially-based approaches, didactics is always connected to a context in society through its relationship to the curriculum. Curriculum sets the limits within which didactics can operate. The limits are the aims and goals of education at a given moment, within a given context. Otherwise stated, didactics is in diachronic relation with the educational situation, while pedagogy is in synchronic relation to it.

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278 Yves Bertrand and Jean Houssaye, loc. cit.
279 Yves Bertrand and Jean Houssaye, pp.33-51.
280 Ibid.
281 Ibid.
282 Ibid.
283 Francois V. Tochon and Hugh Munby, ‘Novice and expert teachers’ time epistemology: A wave function from didactics to pedagogy’, *Teacher & Teacher Education*, 9, 1993, pp. 205-218.
In effect, it is through curriculum that didactics could be perceived as no less political than pedagogy. From this point of view, didactics cannot be reduced to a neutral instrument of educational policies or to a set of teaching methods. Since its reinvention as a human science (in distinction to the natural sciences) by German educationalists in the early twentieth century, 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 provides the link with pedagogy. Besides, the ‘why?’ question was extended in the ‘what should they become?’ question, which marks a place of intersection between didactics and pedagogy.

### 3.3 A complicated relationship

As the two major currents of reflection on education, didactics and pedagogy refer to the same reality in that they both constitute ways of investigating the educational phenomenon. However, as we have seen, each one is a distinct field of educational research, and the degree of distinction differs across countries and educational traditions. Educational theorising across continental Europe has historically preserved a meaning for the term ‘didactics’ distinct from that of ‘pedagogy’. On the other hand, in the English-speaking world, ‘didactics’ has remained a marginalised – if not invisible – conception within the educational discourse. At best, it overlaps with pedagogy, although a part of its subjects has been treated by the developing field of *learning theories*. In support of this criticism, Hamilton brings to the discussion the characteristic example of the 10-volume Oxford English Dictionary of the 1970s, which included the ‘art or science of teaching’ among its definitions for pedagogy, and the almost identical ‘science or art of teaching’ for didactics. With a later article in 2007, Cambridge Education scholar Paul Andrews, in his turn, underlines that the word ‘didactics’ failed to return any hits, during that point in time, in any of three UK-based online dictionaries.

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285 Learning theories transcend the classical philosophical approaches of Plato or Lock. They are frameworks and models (recently drawing from psychology and learning neuroscience) that are treating how a learner absorbs, processes and transforms stimuli from the educational setting. Behaviourism, cognitivism, constructivism, design-based learning, etc. are examples of learning theories.

286 David Hamilton, loc. cit.

287 During the period of this publication Paul Andrews was Senior Lecturer in the Faculty of Education at the University of Cambridge (1999-2013). Since September 2013 he is Professor of the Stockholm University in the Department of Mathematics and Science Education.
Conversely, the word ‘didactic’ (adjective) appears in the same English dictionaries with an almost exclusively pejorative meaning. Andrews\(^{288}\) refers to this fact by what he describes as a clearly anti-intellectual perspective underlying definitions of didactic. He adds that ‘pedagogy’ is found to return entries related to teaching and the study of teaching (an obvious permutation from European continental meanings of *didactics* and *pedagogy*), while the basic meaning of the word ‘pedagogue’\(^{289}\) reverts to disapproval and concludes:

The a-theoretical nature of English education finds support in the essentially equivalent sentiments embedded in both ‘didactic’ and ‘pedagogue’\(^{290}\).

In extension to the above, an updated search of the word ‘didactics’ (for the purposes of this thesis) in two on-line UK-based dictionaries\(^{291}\) came to confirm the case by returning no results at all, whereas the search result in a third one was: (functioning as singular) ‘the art or science of teaching’\(^{292}\). In conclusion, amplifying his remark on the exclusion of the words ‘didactics’ and ‘pedagogy’ from the English [*sic*] tradition of educational discourse and the overall negative connotations of their derivatives, Andrews characterises English education as ‘essentially a-theoretical’. This reality has been disguised under the pretence of intellectual respectability of the instructor’s personal teaching style. The mainstream educational worldview for new-trained instructors, even in recent years, has been that they develop a teaching style suitable to themselves. Further, the term ‘trainee’ as it is used in the English-speaking academic field of education insinuates that teaching is a replicable skill, and therefore another proof of the a-theoretical nature of English education. Hamilton\(^{293}\) locates the historical origins of this rejection in nineteenth century English schooling. At that time the political goals of English schooling, he claims, were incompatible with notions of mental growth, understanding, self-realisation and social change. Although the idea of a science of teaching and learning (in Europe deriving often from Herbart\(^{294}\)) circulated in Anglo-American educational discussions towards the end of nineteenth century, it was


\(^{289}\) The word ‘pedagogue’, which one might expect to refer to a person with an interest in pedagogy, or one leading pedagogy, the lexical definitions range from disapproving, as ‘the teacher who gives too much attention to formal rules and is not interesting’ (dictionary.cambridge.org) to humorous, as ‘a teacher, especially a strict and pedantic one’ (oxforddictionaries.com).

\(^{290}\) Paul Andrews, loc. cit.


\(^{293}\) David Hamilton, loc. cit.

\(^{294}\) 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). His ideas about the organisation of instruction and lesson planning were intimately bound to his philosophical ideas. 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.
deemed as superfluous to English understandings of education and schooling. Amid efforts to maintain the status quo of a predetermined and immoveable order of things, appropriate educational systems developed specifically to address social classes, as self-contained and segmented. According to this view, here is what 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. In spite of what has been mentioned above about the two words-indicators of English education theorising, a gradual domination of the term ‘pedagogy’ over the term ‘didactics’ has been observed in more recent discourse.

It would be illuminating to discover the root of this preference. One plausible understanding points to two seminal interventions of the early 1970s, which have gained wide recognition amongst North-American and British scholars. The first was Paulo Freire’s ‘Pedagogy of the Oppressed’ in 1971 and the second was Basil Bernstein’s ‘On the classification and framing of educational knowledge’ in the same year. For Hamilton this has marked a turning point in the hegemonic establishment of pedagogy as a discipline.

From another point of view, pedagogy developed within English-speaking international scholarly discourses of the following years, establishing a close association with historical, social and cultural analysis. However, as Andrews stresses, it appears that in English there is [still] no word for the general concept familiar to continental educationalists as pedagogy, since in English the word is reserved for what they would describe as didactics.

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

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295 Hamilton supports this explanation also by underlining that visions of Alexander Bain (Education as a Science, 1879) or of Herbart (The Science of Education, English version, 1892) gained from the outset a marginal position within the English world.

296 David Hamilton, loc. cit.


299 David Hamilton, loc. cit.

300 Paul Andrews, loc. cit.
3.4 Didactic tools for architectural education

In contemporary educational literature the term ‘didactic tools’ is used alternately with the term ‘pedagogical tools’ in the sense of instruction tools. In this thesis, given the differences between the two fields already discussed, to decide on the term ‘didactic tools’ vs. ‘pedagogical tools’ is primarily a conceptual choice. With the aim of making this distinction clearer I am proposing the following example: we will refer to the example as a didactic tool that the instructor opts to employ at a given moment in their teaching practice. However the example of the teacher (meaning his or her paradigmatic attitude or character) would belong to the category of pedagogy. Given the difference of scale between didactics and pedagogy, I would propose the notion of ‘pedagogical frames’ in the place of the misleading term ‘pedagogical tools’.

Generally, by ‘didactic tools’ we seek to describe various forms of means and processes, purposefully used in instruction, with the objective of reaching a desired learning outcome via a certain learning process. Nonetheless, at this stage of the study we can provide definitions for the term ‘didactic tools’ only by way of example. Some of them could be the following:

- textbooks or computer applications and multimedia, workshops or an entire course.
- projects, lectures, interdisciplinary case studies, case study analysis, computer-based environments, essay-assignments, etc.
- cognitive apparatuses such as think-maps and Web-pad.\(^{301}\)
- choices of activities, experimental sites, forms of assignments, means of communication, etc.
- inter-disciplinary settings of instruction, where architectural students work with students from other areas, addressing multifaceted problems by seeking information from many subject areas, thus learning to coordinate authentic problems in their entirety.
- a thematic framework, in the sense of an apparatus that maintains consistency within a cycle of work which finally closes, developing in

students a sense of completed-ness.\textsuperscript{302} It may function at the cognitive and at the psychological level.

- dialectic methods implied by instruction, such as the ‘English chat’\textsuperscript{303}, or the ‘intellectual conflict’.\textsuperscript{304}

- means of positive reinforcement, such as a reconfirmation that students’ work is accepted and has a wider meaning to others – what Sir Peter Cook has called ‘marketability’ or ‘external recognition’ for students’ work.\textsuperscript{305}

3.5 The relevance to architectural education

The absence of a skeleton of teaching theory in architecture is evident for several scholars of architectural education and has been described more recently in their published works.\textsuperscript{306} Empirical ethnographic research\textsuperscript{307} undertaken in U.K. schools of architecture has revealed that design tutors claim design teaching an intuitive act for which theory is not needed. This absence accounts for both advantages and disadvantages. At first, the general tendency among architectural tutors has been to see the situation as a condition for free action and for unobstructed, creative experimentation in teaching – a kind of improvisation.\textsuperscript{308} It could even prove promising for unprecedented approaches to the didactics of architecture. A reserve should be kept, however, as this condition often results in characteristics of architectural education, such as the personalisation of successful educational paradigms. Donald Schön has referred to the organisation of (some) schools around the work of a particular ‘great man’.\textsuperscript{309} The possibility of disseminating successful practices beyond a small circle of instructors, thus making it beneficial for the educational system overall, remains doubtful.

On the other hand, the lack of teaching theories accounts for disadvantages of architectural education, making it susceptible to a number of deficiencies. In view of the fact that there is no common ground in the practice of teaching with any theory, clear educational goals cannot easily be set up, unambiguous criteria cannot be established, and it is difficult to hold


\textsuperscript{305} Jeff Kipnis, loc. cit.


\textsuperscript{307} Undertaken by academic Helena Webster, of the School of Architecture at Oxford Brooks University. More on this research in: Helena Webster (2005, 2007).

\textsuperscript{308} The theme of improvisation as an approach in the teaching of architecture is known to preoccupy didactics theory and is discussed later in this thesis, for example, see section 5.6.1.

educational practices to account. Further consequences may also include the limited possibility of assess to both teaching and learning, anxiety due to insecurity, and fear of ‘failure’ for both teachers and students, the shaping of student-teacher relations by power and issues of mistrust, unproductive teaching experimentations at the expense of student learning, and the difficulty involved in tracking the association of pedagogical intentions with didactic outcomes, etc.

Connected with what could be perceived as a trend of aversion within educational theory, in terms mentioned in 2.3 above, is a perspective that advocates anti-theoreticism.\footnote{In philosophy and particularly political philosophy, theoreticism is the preference for theory over practice (or, more broadly, abstract knowledge over concrete action), or a philosophical position which would lead to such a preference. The term is often used pejoratively. Available from: https://en.wikipedia.org/wiki/Theoreticism [Retrieved 24/02/2010].} Among academics in Education, Wilfred Carr\footnote{Professor of philosophy of education, at the School of Education, University of Sheffield, as of June 2015.} suggests that educational theory has been nothing but the expression of a need for a reference to an authoritative, external and independent source of truth when we come to justify educational practice.\footnote{Wilfred Carr, ‘Education without Theory’, British Journal of Educational Studies, 54(2), 2006, pp.136-159.} Although this need is recognised as real, such an external, independent, authoritative source does not exist, he claims, elaborating:

Educational theory is the name given to various futile attempts that have been made over the last hundred years to stand outside our educational practices in order to explain and justify them. And what I am going to propose on the basis of this argument is that the time has now come to admit that we cannot occupy a position outside practice and that we should now bring the whole educational theory enterprise to a dignified end\footnote{Ibid.} The argument seems to derive from a reaction to the view which Carr holds as foundationalism: a general belief that in order to prove rational and true, our claims have to rest on basic beliefs and foundations, which in their turn need no justification, as self-evident and dogmatic. Hence, educational theory is a foundationalist project\footnote{Ibid.} and in the current condition of post-foundationalism it is acknowledged that there are neither unmediated facts, nor a neutral observational language, and that we cannot occupy a position outside of history and culture\footnote{John Furlong, Education - An Anatomy of the Discipline: Rescuing the university project? New York: Routledge, 2013, pp.103, 174.}. While we can acknowledge these characteristics of the post-foundational (and of the post-modern) research paradigm, we have to clarify that the theory necessary for architectural education – as set out in this thesis – is not limited to the practitioners’
‘framework of beliefs and understandings’, which necessarily resort to external, independent, authoritative sources of truth.

Architectural education may be seen as the praxis (practice) aiming to make an architect of the student. Education may not, however, be limited to the instruction of a practice, as it can additionally provide the service of making articulate by means of reason (logos), which accounts for the important role of theory. A theory of architectural education would be a reflection on the praxis that education is or ought to be. It would aim at the comprehension of the educational phenomenon and of its nature in relation to the ontology of architecture: of student and teacher anthropologies, of the way students learn, of the nature of the field knowledge, etc. Upon achieving its goals, theory is intended to retrofit praxis, to inform education towards developing a formal (normative) didactics of architecture.

Architectural education cannot remain unaffected by the lack of enquiry at the level of didactics. It is indicative that, in its relevant discourse, terminology involves only derivatives of pedagogy, 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. The thesis argues that an enquiry of architectural education that ignores the framework 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 and specified. Questions of a new order need to stimulate the discussion. Perhaps, then, it would not be an exaggeration to suggest that by reintroducing didactics into the vocabulary of an educational discourse on architecture, the limits of its world will be broadened.

There are cases of discussion about architectural education, in which questions, answers and arguments are all entangled because they originate indiscriminately from within the areas of pedagogy and didactics. As an example of this problem this thesis examined the emblematic Oxford Union debate of 2008. This made one of the two exemplary cases of public discussion analysed here. The motion of the debate echoed an essential question, which, by pertaining to the level of didactics, remained essentially unanswered. The question

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316 Ibid.
317 Here, the word is used more in the sense of the Greek ‘παιδεία’ and of the German term ‘bildung’, which mean both education and formation. In this sense, education refers to a process of becoming of the human being with regards to her humanity as well as to her innate intellectual capacities.
319 Already discussed in chapter one.
was about where (implying how) architecture might be better taught and learnt — in schools of architecture or in architectural offices. As it became evident, the discussion highlighted sound arguments evincing that the end of ideological debates about the goals and character of education has not come yet. The audience was thus able to follow with a meaningful riposte to develop against the dominant discourse that identified knowledge with information, and society with economy. However, the arguments on both sides consisted of judgments at the level of pedagogy even when addressing questions of didactics, and vice versa. For instance, the type of architect that society needs is a topic of the philosophy of education, and arguments about it pertain to the order of architectural pedagogy. Yet, the employment of such arguments would not answer the question of how architecture is better taught and learnt, because this issue pertains to the area of didactics. Signs of terminological confusion in this case reflect a conceptual issue.

Consequently, the treatment of these issues in similar terms invariably results in polarisation instead of a sense of conclusiveness. By this we do not imply that didactics and pedagogy are totally dissociated from each other. This chapter presents aspects of the complex relationship between didactics and pedagogy established in educational theorising.

Then again, the special relationship between architectural pedagogies and the didactics of architecture functions in this thesis as an overarching question, and particularly how the broad, philosophical and political questions about architectural education that inhabit its public discussions and reflections could be accommodated in terms of its didactics. Architectural pedagogies and didactics are here seen as two variables of the same function — that of education. For these reasons, I claim that to make a fundamental distinction between pedagogy and didactics becomes essential in helping maintain logical coherence within any discussion about or enquiry into architectural education. As has already been mentioned, the developing self-reflections and dialogue with colleagues constitute a theoretical form of didactics, yet one that is not of a scientific nature. It is known that educators tend to understand the experiences they obtain in the educational setting, in such a way as to construct their own knowledge. The thinking processes of their experiences constitute a

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320 The discussion about ‘where’ has a clearly cognitive dimension and the topic of situatedness has extensively preoccupied cognitive science, particularly since the 1980s. Moreover, since the 1920s, L. Vygotsky had already introduced the idea that a knowing subject’s behaviour and cognition were also the result of the close relationship between the subject and its environment.

321 Articulated by Sir Peter Cook and Jeremy Till, who both argued against the motion. For more on the developed arguments in chapter one, see also section 1.3.1.2, ‘Opposition Arguments’. 

128
practical knowledge. The validity of this practical knowledge is examined within the theoretical framework of personal epistemology.\footnote{See also the discussion by Barbara Hofer on how personal epistemology is being perceived either as a cognitive developmental process or as a system of beliefs that influence the knowledge construction processes. In: Barbara K. Hofer, ‘Epistemological Understanding as a Metacognitive Process: Thinking Aloud During Online Searching’, \textit{Educational Psychologist} 39(1), 2004, pp.43–55.}

Predominant methodological approaches to teaching are empirical and based on such practical knowledge, on previous experience and on a tradition. They do not seem to take into account continuously emerging theoretical frameworks that re-evaluate and re-examine prior knowledge and experiences about teaching and learning, as a cognitive process\footnote{See, for example, Eastman, McCracken and Newstetter (2001), pp.270-273.} and introduce new perspectives. Hence, a question emerges about the feasibility of architecture having its own \textit{special didactics}, as a theoretically articulate scientific subject. A necessary step to this end would be the development of a descriptive didactics. 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.\footnote{Henry Giroux, op. cit., pp.84, 406, 418.} 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 which constitute normative theories that we call \textit{pedagogies}.

Pedagogy, as theory of normative character, prescribes what \textit{should} or \textit{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 – hence, the synchronic relation of pedagogy with the educational situation. Didactics, on the other hand, consists of factual propositions about how a goal can be achieved. Drawing from science, didactics is not preoccupied with how human nature \textit{should} be, but instead it contends with understanding it and describing it. It deals with discovery of knowledge, therefore, with true beliefs and with observable and (sometimes) measurable characteristics of human nature.

It would be fair to assume that while pedagogy addresses attitudes (what \textit{should be}), and desire, didactics addresses facts (what \textit{is}) and reason. Attitudes and desire are forces motivating to human action. But 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 over whether there is a
logical relation between the normative and the descriptive part of educational theorising. 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 the times of David Hume, who pointed to the ‘is–ought’ logical gap, 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’.

At this point it is worth examining why this problem might be relevant to architectural education. I believe that an attempt to answer this question might prove practically useful, letting us know whether the long-established teaching traditions, practices, and subject matter etc. in architectural education 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. Another way to put the question would be to ask whether a didactics of architecture could develop specifically connected to a concrete pedagogy and vice versa. If the answer is that it cannot, then this would mean that didactics is simply instrumental and can even have a universal value regardless of various pedagogies, whether emancipative, authoritative, etc. In the opposite case, a connection might exist between didactics and the normative characteristics – or the normative area – of a particular pedagogy.

We could see more questions stemming from this line of enquiry. One such issue would be the possibility of two antithetical pedagogies (i.e. a progressive, student-centred and a conservative, teacher-centred) deploying/drawing from the same didactic tools to achieve their (opposing) principles and educational goals. This leads us to question whether each one of these pedagogies needs a different didactics, specific to its aspirations, in order to attain its goals. Related to this is the question of the possibility of different didactic tools in architectural education (i.e. the studio project or the live project) serving different or even opposing educational theories (pedagogies).

### 3.6 The potential contribution of a Didactics specific to architecture

Despite the difficulties arising from the ‘is–ought problem’, educationalists have brought forth a description of a relationship that appears to suggest quite the opposite, or what could be seen as a reconciliation of the problematic cohabitation of normative and descriptive educational theorising. One of the first educationalists to do so was John Dewey in the early twentieth century. The relationship (described above) is portrayed in the figure of the

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325 The book was first published at the end of 1738: David A. Hume, *Treatise of Human Nature*, Book III, Part I, Section I.
‘Learning Cycle’, which illustrates a process that roughly involves three steps. In the first, 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, such as how things happen, or about students’ requirements, and local conditions, interactions, etc. After this, they reflect on their understanding and proceed to make evaluative judgments, asking, for example, whether theirs is a good practice and why. Finally, they transform the new knowledge produced by evaluations through practical reasoning, to prescriptive propositions, i.e. enquiring into ‘which direction of teaching, and what content, method, etc. should result in new planning?’ This part 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’).

From the standpoint of educationalists it is understood that people who teach are facing the challenge of bridging the experience of ‘is’ within their teaching practice with the ‘ought’ of formal normative theories. The challenge promotes a reflective stance, which may further develop into a private theory that serves to fill the gap between the two. Research on the epistemic nature of teachers’ practical knowledge revealed that they hold tacit beliefs about the nature of their knowledge and its acquisition, and they construct this knowledge by operating at the cognitive level while justifying it at the epistemic cognitive level. Finally, they evaluate their justifications about this knowledge at the epistemic meta-cognitive level.

In conclusion, the question on whether architectural pedagogies and didactics are logically associated to one another can be rephrased as such: ‘Which pedagogies – meaning “which normative theories” – can be deduced from didactic praxis (via a theory of descriptive content)?’

To respond to this apparent conflict, it might prove useful to distinguish between two categories that adhere to the normative approach: the ones that are deducible from facts (is) and the others that are not. However, the question remains: which normative theories belong to each category and why is it useful to know? It is generally perceived that


328 Teachers’ practical knowledge is guiding their practice of teaching and consists of all of their cognitions, i.e. values, beliefs, motives, as well as both declarative and procedural knowledge. For more, see also: Khalil Gholami, Representation of the epistemic nature of Teachers’ Practical knowledge as a meta-cognition process, ECER Conference, Geneva, 2006. Available from: http://66.102.9.104/search?q=cache:XcTfIJeBSicJ:www.hwlsinki.fi/~pkansane/Kansanen_Meri.pdf+general+didactics&hl=en&ct=clnk&cd=10 [Accessed 26/04/2007]

329 Between the Humean approach of the ‘is-ought’ problem and the educationalists’ perspective as portrayed in the Learning Cycle.
normative theories of an ideological, political, or ethical character (i.e. conservative, progressive, emancipative, authoritative etc.) cannot be deduced from factual judgments (descriptions of facts).

If architecture were to have its special didactics (didactica specialis) as a theoretically articulate, scientific subject, this would consist of a descriptive, normative didactics and a meta-didactics. Therefore, a necessary initial step towards it would be the development of a descriptive didactics.

### 3.7 Descriptive didactics for architecture

A descriptive didactics for architecture would be concerned with empirical studies of actual or past teaching in architecture. Descriptive studies of the norms and values of teaching, subjected to empirical research, could constitute architecture’s descriptive didactics. In turn, the development of architecture’s descriptive didactics would allow us to distinguish among the various pedagogical theories, those logically implied from didactics, and the ones non-logically-implied, which we could call ‘arbitrary’. Descriptive didactics could (also) inform us of whether a specific pedagogy has become an integral part of the learning process. In this way, it would be possible to reconsider and reposition pedagogies across this dividing line, hence, modifying an initial categorisation by means of the descriptive didactics. For example, we could examine the possibility of a Critical Pedagogy for architecture. As a theory that draws from political philosophy and educational sociology, it would initially be considered as the kind of normative theory that cannot be imposed by 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, critical pedagogy involves a factual body of key ideas, i.e. power-knowledge relations, deep-meaning understanding, social context, etc., which are subject to verifiability. Analysis by means of a 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

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331 Critical pedagogy is a body of education theory, which extends critical theory to examining power-culture relations in reference to class, race, gender and social justice within education. It views school and the educational institution as a whole as the vehicle to social reform. Much of the theory is concerned with power relations in the school and with revealing its perpetuating role of the social status quo. Basic proponents are Henry Giroux, Peter McLaren and Michael Apple, in the US. An alternative model for architectural education that would be informed by critical pedagogy theory was first discussed by C. Craig Crysler in his article titled ‘Critical Pedagogy and Architectural Education’, in the JAE issue of 1995 (pp, 208-217). In 2003-04 I was introduced to the ideas of Critical Pedagogy and of Paulo Freire’s Theory of Education for Liberation, for the first time, by Professor C. Craig Crysler, in the framework of a Directed Study course at U.C. Berkeley Architecture. In 2005-06 I wrote on ‘A Critical Pedagogy for linking secondary education with architectural education’, for a Master’s thesis in Education at the SFSU (2006).
concepts of unlearning, learning and relearning. Consequently, we would alter our initial judgment and would subsequently view 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 architectural learning and teaching in a special way.

Conversely, we often notice, either in the literature or in the discussions, that educational tools, such as the Design Studio project and the live project, are mostly discussed in terms of pedagogy without the clarification that they are both didactic rather than pedagogical tools. These are educational tools, which aim to increase the efficiency of learning and teaching. In the process of achieving the educational goals set by a certain pedagogy, the didactic tools become the media. As such, they are justifiable by rational means: by psychology of learning, cognitive theories, and even neuroscience of learning, or rational investigation. This is because what is effective and what is not is subject to an empirical and theoretical investigation, and not of a normative approach.

3.8 Normative didactics

Architectural education may occur in the absence of an articulate theory of education for architects. However, its practice (teaching), like any educational practice, is 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). It is also dependent on the nature of architecture (its ontology), the value of specific forms of content (that is, what knowledge and skills are most worthwhile), on adequate forms of instruction (that is, how best can a content be taught and learned, in what settings and by what means), and learning opportunities for students (subjects, instruction, teachers’ knowledge of their students, inclusion and equity pedagogy). Therefore, teaching involves choices pertaining to (educational) goals, content and methods as well as planning for relevant action.

332 These are key-concepts in Antonio Gramsci’s educational theorizing on radical adult education. Based on the premise that every hegemonic relationship is by necessity an educational relationship, Gramsci introduced the idea of unlearning and relearning definitions of authoritative knowledge. See, for example, Peter Mayo, Gramsci, Freire and adult education: possibilities for transformative action. London: Zed Books, 1999, pp.138-142.

333 More about this ambiguity has been discussed in section 3.4 on the Didactic Tools.

334 I further elaborate on the relation between theory and practice in chapter one, in the discussion of the Oxford Union Debate arguments, section 1.3.1.1, and of Alex Tzonis’ proposition for architecture’s ‘Teaching Hospital’, section 1.4.
By treating prescriptive (normative) statements of this kind, asserting how things should or ought to be, which things are good or bad, which actions are right or wrong, how to value them, etc., we are discussing and establishing normative systems and we are critically examining normative problems. This is what constitutes the normative didactics of architecture. Normative statements are integral to human life, as they are essential in prioritising goals and in organising and planning for actions. A key question for the essence of a normative didactics of architecture that is raised here is whether they can be discussed rationally or they are arbitrary in nature. Practically speaking, is there a danger of norms and rules being superimposed upon those teaching in architecture, and by whom? Could anyone teaching architecture establish a normative system of their own?

The question of rationality of normative statements has preoccupied philosophy since very early on. In the attempt to answer it, a tradition has developed: the ‘tradition of practical reason’ was initiated by Aristotle, continued by Immanuel Kant and in our own time extended by Jurgen Habermas. This tradition is affirmative that normative statements can actually be discussed or defended rationally. In opposition to this is a tradition of emotivism, which claims that normative statements are expressions of emotions and therefore have no rational content. On the other hand, normative statements (involving ‘ought’ and ‘should’) are usually seen to contrast with positive statements (descriptive, explanatory, constative) when they modify theories or propositions. Positive statements are about factual statements, attempting to describe reality (‘is’). The logical differences between normative and positive statements are important to the discussion of a normative didactics.

What, then, would constitute a normative didactics for architecture? Considering the aforementioned conceptual distinction, the enquiry into architectural education could address the possible development of a didactics specific to architecture – a special didactics – of architecture that would take into account the specificity of knowledge in architectural education, as well as the how and why. The relations between all participants of the instructional process constitutes a framework for investigating and mapping the teaching practices in architectural education, i.e. a process of identification, itemisation, and analysis of its didactical tools. A graphic model that portrays the relations between the participants of the instructional process is the didactic triangle –

335 Jan Bengtsson, loc. cit.
336 Defined as ‘being or relating to an utterance (as an assertion, question, or command) that is capable of being judged true or false’. Available from http://www.merriam-webster.com [Retrieved 11/11/2009].
337 Known as the ‘Ought-Is’ problem, philosophers began to take cognizance, in the eighteenth century, after David Hume’s famous assertion that one cannot derive an ‘ought’ from an ‘is’.
simplistic and yet useful. It was first introduced by the nineteenth century German philosopher and founder of scientific didactics, Friedrich Herbart. At its three poles the triangle has the teacher, the learner and the content. Although these relations should be viewed as a whole, in reality they are examined in pairs: teacher-learner, teacher-content, and learner-content.

The teacher-content relation focuses on the teacher’s competence in content – that is the subject-matter. What is the nature of subject-matter in architecture’s design studio? When we refer to subject didactics (i.e. didactics of architecture), particularly with adult learners, the importance is placed on the balance between knowledge expertise and pedagogic competence. Thus is established the idea that a teacher must have something that the students do not have and in terms of mastery of content knowledge this means sufficient academic studies or professional knowledge and competence. Particularly in architecture, the teacher is expected to hold professional qualifications and practical experience, usually measured by the number of commissions and architectural competition awards. Moreover, it is noticeable that, based on the commonly shared premise that all knowledge holders are qualified to teach [undergraduate] students, any credit of teacher training or education seems unnecessary and out of the question. Chen and Heylighen appear to challenge this condition, on the grounds of empirical research in the form of administrative evaluation processes and students’ responses, which reveal that ‘not every tutor presents successful studio guiding in order to furnish future practitioners with effective design education’.

From another point of view, it is considered important that the teacher’s relation to the content is sufficiently multi-faceted, having sufficient pedagogical competence. It is worth noting that from this point of view, it is questionable whether architectural educators are benefiting from access to a system of accreditation in pedagogical competence. The institution of Annie Spink awards in the British system of architectural education can be seen as an effort to move in this direction.

Of all three (teacher, learner, content), the key-relation to didactic understanding is the relation that the teacher has, not with each single pole, but with the relation learner-

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341 The two authors were pursuing research on architectural education at the Department of Architecture, Urbanism and Planning, at the Katholieke Universiteit Leuven in Belgium.
content.\textsuperscript{343} This relation to another relation is called ‘didactic relation’. To demonstrate its importance they Kansanen and Meri elaborate:

It may be noticed that concentrating on the content makes the teacher an expert, and concentrating on a student makes the teacher a caretaker of the pedagogical relation. To concentrate on the student-content relation, is however the quintessence of the teacher’s profession.\textsuperscript{344}

For an instructor in architecture, to concentrate on the student-content relation implies a preoccupation with the meta-cognitive aspect of the situated educational phenomenon – of the individual student’s learning. It is a concern with what content is appropriate for the individual student, based on a previously acknowledged pattern experience accumulation.

On the other hand, the pedagogical relation – the relation between the student and the teacher – is also acknowledged by many scholars as being of special importance. Kansanen and Meri\textsuperscript{345} summarise the thoughts of Wolfgang Klafki,\textsuperscript{346} who stresses the significance of this relation for the young person. The relation, for Klafki, is by nature, an interactive one between the student and the teacher, one that can be based neither on compulsion (upon the student) nor on permanence. The young person becomes progressively emancipated and evades the relationship as they develop into an independent person of age. In informal pedagogical discourse, this evolvement has been referred to as ‘the pedagogical suicide of the teacher’. Elsewhere, according to Immanuel Kant, this is the ‘pedagogical paradox’.

A rather original perspective on the pedagogical relation has been proposed by Hannah Arendt in her essay on ‘The Crisis in Education’.\textsuperscript{347} Here Arendt stresses the particularity of the teacher-student relation, which has to be seen as exceptional to any other human relation, in that the teacher must assume an unparalleled responsibility:

The teacher’s qualification consists in knowing the world and being able to instruct others about it, but his authority rests on his assumption of responsibility for that world.\textsuperscript{348}

Arendt essentially sheds light on the relation between adult teachers and younger pupils; however, the underlying logic in her argument permits an analogy with the pedagogical

\textsuperscript{343} Ibid.
\textsuperscript{344} Ibid.
\textsuperscript{345} Ibid.
\textsuperscript{348} Idem.
relation in architectural education. In her terms, the architectural tutor has on the one hand
the students (prospective architects) and on the other, the world of architecture that the
students must gradually become a part of. Becoming a part of the world of architecture goes
way beyond amassing information about it. It involves becoming able to feel a part of it and
wanting to act responsibly within it. The students have to be able to reach the point where
they say: This is our world. This is just another aspect of the teacher-student pedagogical
relation, with the caveat that issues such as the hidden curriculum and habitus be taken into
consideration.

3.9 Metadidactics

In light of extensive discussion in recent years, it is fair to assume that the
renegotiation of educational goal-setting appears as a sine qua non condition for change in
architectural education. How can the philosophical presuppositions of higher architectural
education actually be addressed? What is its role in serving, on one hand, professional
reproduction and on the other, the broader needs of society, such as educating for (world-)
citizenship and (global) environmental consciousness, as well as cultivating critical judgment
etc.? The process of discerning between training in an art and practice in education (in the
sense of παιδεία [paideia] or bildung349) could drive the enquiry. This would enable us to
clarify educational goals for architectural education. After all, education is not limited to the
instruction of a practice, but provides the service of making articulate by means of thought
and reason (logos). This is confirmed in the expression of contemporary educational theory,
which [invariably] encourages development of the student’s higher order cognitive capacities
(i.e. critical thinking, problem-solving and decision-making). As such, architectural
education is primarily in need of its own meta-didactics, its philosophy of education. This
will provide architectural education with its ontological, epistemological and axiological
foundations – much required for setting up a common basis for discussion and further
enquiry.

349 Both words, ‘παιδεία’ and ‘bildung’, involve the meaning of education and formation combined. In this sense,
education refers to a process of becoming of the human being with regards to her humanity as well as to her
innate intellectual capacities.
Chapter 4
Reframing the discussion at the extremes

Grounding in educational theory
Paulo Freire – Education for Liberation Theory
Emerging themes, concepts and questions
4.1 Reframing the discussion at the extremes

Even now, fifty years later, the 2008 Oxford Union Debate – which was a turning point in itself - remains an emblematic discussion on architectural education and its prospects. Although this platform for discussing problems, experiences and new proposals was UK-based it attracted delegations from continental Europe and the broader international architectural education scene and tackled a range of perspectives that transcend national limits. Likewise, Tzonis’ proposal for architecture’s ‘New House’, the architectural equivalent of a teaching hospital, is another instance of a holistic approach to the pressing question of improving, updating and reconfirming architectural education, to produce a more effective and paradigmatic model of education.

If we take these two discussions to be representative of the type of discussion taking place in architectural education more widely (even though they are treated as discussion at the extremes in this thesis) they identify two issues. The first is that discussions and deliberations about architectural education are not generally grounded in or connected with educational theories. This is important - even despite what is generally taken to be the a-theoretical character of architectural education as a practice. But architectural education should not be isolated from the context of educational issues that have already preoccupied and been treated by the philosophy of education and contemporary educational theories. The second issue is that remarks, discussions, arguments, syllogisms and proposed solutions all take place in the absence of a – unknown, for architectural education – distinction between the categories of pedagogy and didactics. Without this distinction, any conclusions that drawn from these discussions will not be sufficiently accurate and proposed measures and solutions will be difficult to prove valid and effective.

In relation to the first issue, for instance, both the Oxford Union debate and Tzonis’ proposal raise concerns about ‘reality’ and the ‘real’, the role of the teacher and the teacher-student relationship, different modes of learning, and the purpose and role of (higher) architectural education. These issues have been discussed in significant texts by philosophers and scholars of education. The original dilemmatic question of the discussion at the extremes, on whether architecture should be taught in or out of schools, is echoed in most of these texts. Admittedly, these texts are from different periods and approach the issue of education from different angles and using methods derived from different domains, namely the philosophy of education, sociology, philosophy, critical theory and psychoanalysis. However, the common element amongst these texts is the acknowledgement of an instrumental role of education. For some this is related to social change, whereas for others it is in relation to
individual evolvement. Some examples, fulfilling the above characteristics, will be outlined in what follows.

In light of French philosopher Jacques Rancière’s book ‘The ignorant schoolmaster: Five Lessons in Intellectual Emancipation’, published in 1991, autodidactic learning came to prominence and was subsequently established as the pretext for its treatment in philosophy and the politics of education. The book appears to take a historic approach to the emancipatory educational practice of post-Revolution philosophy of education. However, Rancière actually articulates the theory of intellectual ‘emancipation’ and ‘stultification’ in the present tense. The implied superfluity of the teacher – at least, the traditional type that we know – appears to directly question the necessity of the school itself and, in turn, raise the question of whether education ought to take place in or out of schools? The tutor applies a method in which students are encouraged to learn by themselves, by force of will, without a ‘master-explicator’. They are thus only motivated by their own desire or by the constraints imposed on them by the situation.

The virtue of refraining from verbal explanations, reasoning and reflexive activity in the teaching situation is viewed by Jacques Rancière as a quasi-synonym of love for, and essential involvement in, the adventure of teaching. This coincides with the phenomenological approach encouraged by the descriptive model of architectural didactics that this thesis advocates. This approach to teaching builds on Dewey’s understanding of and emphasis on ‘wholeness’ in the pragmatist notion of experience. It suggests a unity of knowledge, (pre)disposition and ethical, emotive or physical engagement with the teaching situation – all of which could be summarised as the disinterested commitment of the tutor to the cause of teaching.

The arguments for and against formal architectural education and its subjection to the practical demands of the market-place, as they were debated in the 2008 Oxford Union Debate, reflect the Theory of Half-education (Theorie der Halbbildung), introduced by Theodore Adorno, derived from his critique of the liberal theory of education. Adorno opposes the utilitarian ideal of education that aims merely at the development of practical and technical capacities in students. He highlights the risks of the comprehensive model of education (bildung), particularly in conditions of economic crisis when it tends to degenerate

350 Jacques Rancière (1940--) is a French philosopher and Professor emeritus of the Université Paris VIII.
351 Theodore Adorno (1903-1969), German sociologist, philosopher and musicologist, was a member of the Frankfurt School of social theory. As part of his analysis he coined the concept of ‘half-education’ (Halbbildung). For Adorno, the development of liberal theory results from the dialectical struggle between individual autonomy and social conformity. He attributes contemporary educational failures and difficulties to this process, although he identifies liberalism as not only the cause of the current problems but also the perspective of a way out of these problems.
into ‘half-education’ (‘Halbbildung’). Comprehensive education, transformative in character and operative in liberal thought, intends to develop in students the critical capacity to obtain an insightful grasp of complex situations and confront various kinds of problems, not by domain-specific training but by intellectually liberating, mind-broadening education. Further, it aims to turn students into self-determining individuals and active citizens by providing them with appropriate intellectual and cultural experiences. Applying Adorno’s theory to architectural education would reveal certain areas as constitutive of ‘half-education’. These would include plans to teach dimensions of architecture that only partially represent culture and the tendency to prioritise later professional life at the expense of liberal and civic goals of architectural education. Even though half-education might still provide (social and economic) advantages to underprivileged students, these are reduced to material rather than intellectual gains.

Austrian philosopher Ivan Illich’s352 ‘Deschooling Society’, published in 1971, is also relevant to the debate surrounding the necessity of architectural schools. Illich proposes a society without schools and discusses the idea of self-directed education, supported by intentional social relations in fluid informal arrangements – thus coining the term ‘learning webs’. The theory is grounded in a critical analysis of education’s position in modern economies and of its unsuccessful institutionalization. In particular, Illich argues that institutionalization of education in turn, results in the institutionalization of society and, therefore, that methods of de-institutionalizing education are a good starting point for de-institutionalizing society. Later, Illich further develops the themes that he had previously applied to the field of education: the institutionalization of specialized knowledge, the dominant role of technocratic elites in industrial society, and the need to develop new instruments for the re-conquest of practical knowledge by the average citizen.353 Illich proposes that we ‘invert the present deep structure of tools’ in order to ‘give people tools that guarantee their right to work with independent efficiency’. These ideas seem to have influenced later approaches to architectural practice and education such as Christopher Alexander’s Pattern Language.354

352 Ivan Illich (1926-2002), Austrian philosopher., his work consists mainly in a critique of the institutions of contemporary Western culture and of their effect on various domains including education.


354 Christopher Alexander, A Pattern Language: Towns, Buildings, Construction. Oxford University Press, 1977. The book popularised the term ‘Pattern Language’, coined by Alexander. It is a method of organising the descriptions of good design practices, or patterns of successful organisation within architecture. It is meant to capture and re-introduce the deeper wisdom ‘of what brings aliveness’ through a set of interconnected patterns. As a design approach, Pattern Language claims to provide the presuppositions for ordinary people to successfully solve complex design problems.
At the end of 1970’s Ivan Illich discussed whether schooling is in fact necessary, among other ideological issues, with philosopher, theorist of education and educator, Paulo Freire. Freire and Illich are among the late twentieth century’s most important figures in the field of education due to their wide-ranging and perceptive theories linking politics, culture, capitalist economics and human ethics to a rigorous critique of schooling. Both Freire and Illich, after their published works, *Pedagogy of the Oppressed* (1972) and *Deschooling Society* (1970), became best-sellers, became intellectual superstars and leading spokespersons for a generation of young scholars who sought to combat academic privilege and revolutionize campus life post-May 1968. Though initially close friends, political allies and colleagues from 1964 onwards, their collaboration turned into ideological antagonism over the following decades.

### 4.2 Paulo Freire: the relevance of Theory of Education for Liberation

In this next section, I will provide an exposition and analysis of Freire’s educational theory, in order to address the deficit of the discussion at the extremes with regards to connections with educational theories (what previously, in 4.1, I referred to as ‘the first characteristic’). What should become clear is that a large body of theory has already treated most of, if not all, the issues that preoccupy discussions surrounding architectural education. I will not attempt to apply the theoretical principles of Freire’s educational theory onto the present enquiry on architectural education as these are approached through his work *‘Pedagogy of the Oppressed’*. On top of Freire’s model, I will draw on further educational theory and propose a model for architecture’s descriptive didactics (in the next chapter five).

In what follows, some of the reasons for presenting Freire’s educational theory are outlined.

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356 However, as Richard Kahn and Douglas Kellner state in their article ‘Paulo Freire and Ivan Illich: technology, politics and the reconstruction of education’, by the late 1970s, when Freire and Illich began to clash openly on ideological issues like the necessity of schooling, the role of ‘conscientization’ in pedagogy and Freire’s connection to the World Council of Churches, respective camp lines between the two were drawn.


357 Illich took on the role of outsider critic and maverick, much like his friends, Paul Goodman and the ‘home schooling’ movement theorists John Holt and Everett Reimer. More recently, neo-Illlichians like John Ohlinger (1995), Chet Bowers (2000) and Dana Stuchul et al (2002) have tried to challenge critical pedagogy’s iconic status in leftist educational circles by producing strong (sometimes *ad hominem*) critiques of Paulo Freire and those he has influenced. However, the authors claim, these interventions have been met with little debate or rebuttal from both mainstream and critical educators. With the death of Freire in 1997, and Illich in 2002, the opportunity was sadly lost for them to break bread once again, to comment jointly upon their important points of agreement and disagreement, and potentially reconstruct what are arguably two of the strongest radical traditions vis-à-vis education and technology.
Paulo Freire’s radical ideas have influenced (perhaps even shaped) modern approaches to education across a large part of the world. His book ‘Pedagogy of the Oppressed’, the most popular document of critical pedagogy at the time, greatly influenced educational discourse and practice in higher education around the world, especially in the aftermath of May 1968. This atmosphere of changes in higher education significantly impacted the architectural education curricula and the contents of architectural design courses in the decades that followed.

Freire developed the theory of Education for Liberation in the context of a divided, inegalitarian Brazilian society of the postcolonial era. It aimed at ‘liberating’ disenfranchised sections of society, for whom education was either inaccessible or subjugating. Freire, much like Pierre Bourdieu during the same period in France, noticed that formal education served to reproduce social inequality and domination by both privileging and hiding the inherited cultural capital of those in the dominant classes. In that context, liberation meant the struggle of these sections to escape their educational and social destiny. Ultimately, it meant having the chance to move from a state of passivity, alienation and stasis (with regards to their education) to a state of humanization and active involvement in the transformation of reality and the world. Extending these terms beyond the context in which the theory was originally conceived, for this thesis, ‘liberation’ via critical pedagogy education also means the raising of learners’ consciousness and increased humanisation. Additionally, ‘liberation’ requires that those being taught assume responsibility and commit to their own learning, which ought to result in a better grasp of reality, greater independence of judgement and, ultimately, active learning and creativity.

On the other hand, Freire’s theory is an example of compelling philosophy of education – or pedagogy – that has been consistently complemented by relevant didactics and implemented in the real world. It addresses the needs of the learner as individual, but at the same time has proven to be effective, at the larger scale, in society. The educational philosophy of Freire suggests that education not only must, but also really can work for the good of humanity. It is in this sense that Freire’s educational philosophy builds on Kant’s view with regard to education’s impact on the betterment of humanity. Paulo Freire is actually one of the few philosophers, alongside Marcuse and Hegel, who presented an

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358 Paulo Freire, *Pedagogy of the Oppressed*, New York: Herder & Herder, 1972. The book is the most widely known of Freire’s works and a worldwide bestseller; it is considered one of the foundational texts of critical pedagogy.

educational philosophy that develops important aspects of Kant’s solution to Jean Jacques Rousseau’s problem.\textsuperscript{360} It addresses Rousseau’s scepticism as to whether education can work for the good of humanity, especially when one considers aspects\textsuperscript{361} of the human nature that would be exacerbated by education.

Furthermore, Freire’s theory, which focuses on illiteracy amongst adults in the Third World, brought to the surface the distinction between the two co-existing roles of education, namely, the conservative and the subversive. Richard Shaull in the preface of \textit{Pedagogy of the Oppressed} writes:

\begin{quote}
Education either functions as an instrument which is used to facilitate the integration of the younger generation into the logic of the present system and bringing about conformity to it, \textit{or} it becomes ‘the practice of freedom’, the means by which men and women deal critically with reality and discover how to participate in the transformation of their world\textsuperscript{362}
\end{quote}

In this respect, Freire’s work has encouraged an exploration of the inner mechanisms of education, which is a necessary condition for conceiving and designing any intervention in education. This makes it a good model for the kind of theory that can reliably address the types of enquiries raised in the Oxford Union Debate.

Another reason for choosing to address Freire’s theory is its special focus on learners and its emphasis on learners’ mentality. The methods, analyses and theories employed by Freire were based on his long and sensitive experience of teaching. The detailed focus and insightful observations of his [adult] learners enabled him to crystallise a specific mentality of the oppressed people. In this way, Freire was able to demonstrate that learners’ mentality is the result of long term and complicated forces - whether political, economic, social and psychological - and that a prerequisite for any successful pedagogy is that it studies the mentality of learners.\textsuperscript{363}

The development of learners’ critical capacity is a key-feature of Freire’s theory. Likewise, it is an established educational objective for contemporary architectural education. Freire’s philosophy of education aimed at enabling learners to re-focus and adopt a critical stance towards the culture of the colonizer. By reinforcing the distinction between oppressors and oppressed in the learning process, it intended to helping learners identify injustices in

\textsuperscript{360} Michelle J. Johnson, \textit{A Pedagogy for Justice: Kant, Hegel, Marcuse and Freire on Education and the Good Society}, Thesis (PhD), College of Arts and Sciences, University of Kentucky, 2016. Available from: http://uknowledge.uky.edu/philosophy_etds/11 [Accessed 18/06/2017]

\textsuperscript{361} For instance, the antagonistic aspect of human nature could be augmented and developed by means of education, in a direction that would confirm the Latin proverb ‘Homo homini lupus’, meaning ‘A man is a wolf to another man’.

\textsuperscript{362} Paulo Freire, op. cit., p15.

society. Hence, the practical application of this theory in the field seeks to change established perspectives, subvert norms and introduce the ‘new’ in the process of learning.

This was a period of economic, environmental, social, political and ideological crises for the Western societies, with no precedent in the industrialised world: the concept of ‘progress’ seemed to be challenged. As a consequence, social institutions were questioned – including education – thus, reflecting a contestation of the value system overall. These are reasons why, although Pedagogy of the Oppressed was a study of the educational situation in Latin America, it has had a global impact and its findings have been of high interest among educators in many other parts of the world including the U.S. and the U.K. 364

Freire demonstrated that curriculum is not neutral. In fact, it can only be properly understood when socially, economically and politically contextualised. Viewed within its multiple and interacting contexts, curriculum should be read as a political text. Freire’s theory proved that curriculum plays an important role both in oppression as well as in reform. Overall, in the theory of Education for Liberation, Freire linked the categories of history, politics, economics and class to the concepts of culture and power, thus developing a language of critique and a language of hope. 365 The theory holds that classrooms must become dialogical places, so that the development of both students’ consciousness and humanization can take place. He also demonstrated that liberating virtues including hope, compassion, critical problem-posing, play and aesthetic sensibility are particularly pertinent to architectural education.

The Pedagogy of the Oppressed is not just about the redistribution of material sources, but also – if not primarily – a struggle over cultural meaning in relation to the multiple social locations of students and teachers and their position within the global division of labour. Architectural education, especially in conditions of the current economic crisis, cultural globalization and global environmental problems, is overshadowed by analogous projects.

As was mentioned earlier, Freire’s theories were advocated and advanced, in the 1980s, by North American theorists and proponents of critical pedagogy like Henry Giroux, Stanley Aronowitz and Michael Apple. Furthermore, his theory provided the foundations for a number of original theories. The Reproduction (or Correspondence) Theory 366 is one example, which holds that social relations within education replicate the hierarchical division

364 For example we could mention the development of the ‘radical math’ movement in the United States (http://www.radicalmath.org/) and the PAULO, U.K. national training organisation, established in 1999.
365 Ellis Cashmore and Chris Rojek, op. cit., p163.
366 Herb Gintis and Sam Bowles were American economist and social theorists, who developed their ‘correspondence’ theory that connected education and social inequality. Their work, a systematic account of the role of schooling in modern society, became especially influential in the U.K., in particular to the British Sociology of Education. Characteristic example was the famous Open University course E202 Schooling and Society 1976.
of labour. For instance, alienated labour is reflected in students’ lack of control over their education and the curriculum content. Vertical authority lines are reflected in education in the relationships between administrators, teachers and students.

Finally, it is worth noting that Freire’s theory is of particular significance to this thesis and to some of the questions that the thesis intends to raise – especially questions regarding the possibility of logical associations between pedagogies (normative theories) and didactic practices in architectural education. Freire’s theory involves a well-aimed dissection of the established educational approaches (with the value of providing a descriptive didactics), which he depicts as the ‘banking’ model of education and which his own liberation theory undermines and subverts by implementing a consistent didactic approach. This makes Education for Liberation Theory a paradigmatic case of a pedagogy connected to a theoretically articulate set of didactics consisting of descriptive didactics, normative didactics and meta-didactics.

I hope that, for the above-mentioned reasons, it is clearer that this thesis does not intend to apply or test the theoretical principles of Freire’s Pedagogy of the Oppressed onto this enquiry of architectural education. Nonetheless, Paulo Freire belongs to the triad of philosophers that this thesis is strongly indebted to (the others being John Dewey and Hubert Dreyfus).

4.3 Paulo Freire: biographical information

Paulo Reglus Neves Freire367 (1921-1997) was a Brazilian educator and philosopher. He was born in Recife, in North-east Brazil, to a middle-class family who were hit by the Great Depression. This resulted in Freire suffering from chronic and acute hunger as school child. This condition affected his ability to learn at school. The very experience of feeling hungry while a student stayed with him for the rest of his life. Even after the family’s later recovery he claimed to have ‘found himself sharing the plight of the “wretched of the earth”’.368 Therefore, from the age of eleven, he vowed to dedicate his life to fighting child hunger. He enrolled in law school in 1943 and also studied philosophy, focusing on phenomenology and psychology of language. His studies culminated with his doctoral degree in education with a focus on philosophy of education.

He abandoned his work as a lawyer once graduating in order to direct his energies to the area of adult literacy. He started to teach Portuguese in secondary education. From 1946

367 Ellis Cashmore and Chris Rojek, loc. cit.
he was appointed to numerous leading administrative positions, and studied the relationships between pupils, teachers and parents. In 1962, as director of the Department of Cultural Extension of Recife University, he worked on new methods in the teaching of adult literacy. Freire had the opportunity to apply his theories, and the case of three hundred sugarcane workers, in Rio Grande do Norte, who learnt to read and write in just forty-five days remains a testament to his approach to literacy. His first book, *Education as the Practice of Freedom*, published in 1967, and the second, *Pedagogy of the Oppressed*, in 1968, were received positively, especially after their translation into English and Spanish. *Pedagogy of the Oppressed* has since gone on to be one of the most frequently assigned texts in the curricula of U.S. faculties of education.

The 1964 military coup in Brazil suspended Freire’s literacy project, and he was arrested for preaching communism. He was imprisoned for seventy days and then exiled in response to his work on the national literacy campaign. According to Moacir Gadotti, Freire’s leading biographer, the military junta considered Freire to be ‘an international subversive’ and ‘a traitor to Christ and the Brazilian people’. He left the country later that year for what proved to be a sixteen-year exile. During this period, Freire first spent five years in Chile, as a UNESCO consultant with the Research and Training Institute for Agrarian Reform. In 1969 he was appointed to the Harvard University Center for Educational and Developmental Studies, associated with the Center for Studies in Developmental and Social Change. In 1970 he moved to Geneva, Switzerland, as consultant to the Office of Education of the World Council of Churches. There he developed literacy programmes for Tanzania and Guinea-Bissau which focused on the re-Africanisation of these countries in the post-colonial era. Other literacy programmes that he developed targeted former (post-revolution) Portuguese colonies such as Angola, Cabo Verde and Mozambique. After returning to Brazil, in 1979, Freire was appointed Sao Paolo Municipal Secretary of Education, a position he occupied until 1991, during which period he continued to work internationally on projects in Australia, Italy, and the Fiji Islands and many other countries.

The influence of philosophers like Hegel, Marx and members of the Frankfurt School of Critical Theory, like Herbert Marcuse and Erich Fromm, is evident in his work.

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369 Date is of the original edition in Portuguese.
370 Ibid.
371 As an example, I can mention the curriculum of the College of Education at the San Francisco State University, where I pursued graduate studies in the period 2004-2006. More precisely, part of the Critical and Postmodern Pedagogies course reader, compiled by instructor, Professor David Hemphill.
4.4 Paulo Freire: philosophy of education

The work of Paulo Freire stems from, firstly, a criticism of applied conventional pedagogies and, secondly, an optimism about the socially transformative role of formal education. Freire assumes that education not only reproduces social inequalities and injustice, but also manages to internalise oppression into the dominated strata of society. Moreover, he argues that formal education does so by means of its ‘banking’ concept. He thus draws a parallel between two antithetical perceptions of education: the established ‘banking’ model and his own alternative ‘problem-posing’ approach.

The ‘banking’ concept of education derives from the metaphor of knowledge as money which teachers ‘deposit’ into empty bank accounts (students). According to the ‘banking’ model of education, students are perceived as ‘empty vessels’, ‘containers’, or ‘receptacles’ to be ‘filled’ with knowledge by the teacher. In other words, it is a transmission-model of education. This system assumes absolute ignorance on behalf of students and is thus characteristic of the ideology of oppression, says Freire. This model, he argues, is as outdated as the institutionalised education of the last two centuries. Jacques Rancière also raises the point that this model requires that teachers assume that students are ignorant and that they project inferiority and incompetence onto them. In the ‘banking’ concept of education the world is static and learners are not active parts of the world. Instead, they are passive and alienated from it.

In Freire’s alternative ‘problem-posing’ education, students and teachers are co-learners, who are encouraged to engage in the dialectical and the exploratory aspects of learning, drawing initially from problems that relate to students’ lived experiences. In this case, the focus is more on developing students’ critical capacities and deeper understandings of the world and their position in it, rather than on accumulating factual knowledge. Thus, Freire claims, people become humanised, within a world that is in a constant process of development. They are dignified by becoming part of a world that they seek to change and so they follow a liberating process. True communication and solidarity develop in the problem-posing education. The dichotomy between humans (learners) and the world is remedied.

4.4.1 The ‘banking’ model

Within this model, Freire claims, the student-teacher relation involves, on the one hand, a narrating subject,\(^\text{374}\) (the teacher), and on the other, patient and passive learning subjects (the students). The ‘banking’ approach, conversely, is based on the opposition of teacher and students through attitudes and practices which reflect the relationships within the oppressive (authoritarian, non-egalitarian, un-democratic) society more widely. The system maintains and even perpetuates this opposition – Freire named it ‘the student-teacher contradiction’ – which in turn encourages oppressive attitudes and practices in society.\(^\text{375}\)

In the ‘banking’ model, reality\(^\text{376}\) is presented by the teacher as motionless, static, compartmentalised, and predictable for the knower and as a world in which students ultimately do not belong. The subject-matters drawn from this reality are alien to the existential experience of the students. Hence, the ‘banking’ model of education domesticates students by requiring them to passively admit or take for granted certain aspects of knowledge and reject their own preconceptions. Particularly in arts education, this is reflected in the teaching approach in which it is necessary for students to return to a state of the ‘innocent eye’ or, in other words, for students to reject their formal and aesthetic preconceptions.\(^\text{377}\)

Implicit in the banking concept is the assumption of a dichotomy between the individual and the world: the individual is merely in the world, not with the world or with others; the individual is spectator rather than re-creator and re-former. In this view, the individual is not a conscious being; a corpo consciente.\(^\text{378}\)

It is important to note that when Freire criticises the conservative ‘banking’ model’s failure to conceive of the individual as re-creator of the world, he does not mean to suggest that the individual ought to control the world in any hegemonic way. Following the Aristotelian definition, Freire claims that being human is to engage in relationships with

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\(^{374}\) In his original text, Freire, to emphasize the symbolic difference between teacher and student, compared it with the subject-object relation and thus compared Subject (with a capital ‘S’) with object.


\(^{376}\) As per Kant, ontology determines epistemology: the way we define things, the way we ‘see’ things, determines to a great extent the way we choose to learn them.

\(^{377}\) It has its roots in the Bauhaus didactic and pedagogic ‘model’ i.e. in the rationale of the Vorkurs as the educational stage were students returned to a child-like state.

\(^{378}\) Idem. p.62.
He maintains that humans relate to their world in a critical way. Accordingly, reflection is distinguished from reflex, and identified as a uniquely human characteristic. Consequently, he introduces a second distinction: integration with a context versus adaptation to a context. Freire opposes the notion of a state in which the human is an object ready to be adjusted, in favour of one in which the human, as a subject, exercises its capacity to critically adapt and has the freedom to make choices to transform reality.

The ‘banking’ model of education requires an implicit and false understanding of men [sic] as objects. To support this idea, Freire refers to Erich Fromm’s notion of ‘biophilia’ in order to suggest that ‘necrophilia’, in contrast, encapsulates the permanent condition of banking education. Hence, the learner is conditioned with a desire: to transform the organic to inorganic, to approach life mechanically as if all living persons were things, to favour memory rather than experience in education, to privilege having rather than being, as a philosophy towards life, to relate with persons or things only if he possesses them and controls them.

One effect of the ‘banking’ approach is that it turns men into automatons – and thus prevents them from fulfilling their ontological vocation which is to be more fully human. The system’s ‘humanism’, claims Freire, is an attempt to mask this effort. The definition is then enriched as follows: the ‘integrated’ [student] is the subject of intervention in contextual reality, in contrast with the ‘adapted’ [student] who is the object of the process of dehumanization. It is on this bi-polar account that Freire founds his argument that education can and should be a liberating tool. In an attempt to avoid the possibility of alienation and oppression, Freire defines the condition of being human as compatible with knowledge. He writes:

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379 Learning is a social function with implications for the live project. The basic principles of situated learning were discussed earlier in this chapter.
380 The term ‘biophilia’ literally means ‘love of life or living systems.’ It was first used by Erich Fromm to describe a psychological orientation of being attracted to all that is alive and vital, in: Erich Fromm, The Heart of Man, Harper & Row, 1964. The word ‘biophilia’ was frequently used by Fromm as a description of a productive psychological orientation and ‘state of being’. For example, in an addendum to his book The Heart of Man: Its Genius for Good and Evil, Fromm wrote as part of his famous Humanist Credo: ‘I believe that the man choosing progress can find a new unity through the development of all his human forces, which are produced in three orientations. These can be presented separately or together: biophilia, love for humanity and nature, and independence and freedom’ (c. 1965).
382 See also: Max Frisch, Homo Faber Ein Bericht, Suhr Kamp, 1968; the author develops a criticism against the fact that in modern times the meaning of life has been substituted by the ‘living standards’.
384 As is suggested by Bourdieu and Passeron, in The Inheritors (1964), and Stevens, in The Favoured Circle (1998), any attempt to present all students as equals does nothing but perpetuate pre-existing inequalities.
Apart from inquiry, apart from praxis, men cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry men pursue in the world, with the world, and with each other.

In the ‘banking’ model, the teacher is teacher and the student is student in a relationship of asymmetrical authority which, Freire thinks, will inhibit creativity and adaptation and lead to alienation, isolation of consciousness, suppression of context and naturalisation of domination. Indeed, in the ‘banking model’, the educator’s role is to regulate the way the world ‘enters into the students’. The educator ‘fills’ the students by making deposits of information which are supposed to constitute true knowledge. The educated man then becomes the adapted man, because he is a better ‘fit’ for the world. Through Marxist analysis in the context of the Brazilian society, Freire specifies that the theory and methods of the ‘banking model’ of education:

through verbalistic lessons, reading requirements, the methods for evaluating knowledge, the distance between the teacher and the taught, the criteria for promotion – everything in this ready-to-wear approach – serve to obviate thinking.

These remarks imply a power relation where a dominant minority benefits from serving its own interests by prescribing the education of the subordinate majority. It is questionable whether this context is relevant to the type of contemporary model of architectural education that is the subject of this thesis. However, situated within such a discussion, questions about the role of the architectural educator might produce further issues such as the kinds of tools (grading system, the project reviews, the crits, etc.) that are at a tutor’s disposal when such a role is assumed. This would provide a bridge for associating pedagogies with didactics. The Theory of Liberation is an example of a consistent approach, where pedagogical presuppositions are harmoniously (and consistently) translated into didactical practices.

Any (objectivist) observation of the world – that is, any assumption about what is good to do in education – is value-laden. In this sense, an examination of teaching of

385 Freire is here using the word *praxis*, aware of the Aristotelian distinction from *poesis* (for Aristotle, *praxis* is about performing well activities that pertain to the ethical and political spheres). Both inquiry and *praxis* imply an involvement of consciousness: *praxis*, an intentional behaviour, distinguished from mechanical action, must aim at creating a state of affairs – it involves intention. When one simply raise one’s hand, it is a mechanical action – however, when one does it with the intention to salute someone, or to threaten someone, then this raising of the hand is *praxis*.
386 Paulo Freire, op. cit., p.58.
387 Idem, pp. 244-246.
388 Freire at this point in his text (*Pedagogy of the Oppressed*, p.63) makes reference to Sartre and the ‘digestive’ or ‘nurtive’ concept of education, in which knowledge is ‘fed’ by the teacher to students to ‘fill them out’. See also Jean-Paul Sartre, *Une idée fondamentale de la phénoménologie de Husserl: L’intentionnalité*, Paris: Situations 1, 1947.
389 Paulo Freire, op. cit., p63.
architecture in schools could reveal underlying values in the ways students are taught to see the world. What would be the best mode of education to address this issue? Is any didactic tool adequate for doing so? What would *conscientisation* mean to architectural students in our context?

### 4.4.2 The alternative of problem-posing

In contrast with the traditional, ‘banking’ model of education that propagates domination, Freire proposed an alternative transformative, liberating model of education. Challenging the modernist paradigm of human as dominant over nature and the world, the ideal of Freire’s theory is an individual who, freed of oppression, becomes an active agent, consciously in control of their own destiny and the world. Education becomes the means of meaningfully shaping the individual and society, towards the raising of consciousness, or ‘conscientisation’, translating the original Freirean term, *conscientização*. Hence, the liberation education theory advocates a more world-mediated approach to education.

Central to this theory is the concept of problem-posing. The problem-posing approach to education enhances creative power and involves a constant unveiling of reality. It strives for the emergence of consciousness and of critical intervention in reality. ‘Students, as they are increasingly posed with problems relating to them in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge. Because they understand the challenge as interrelated to other problems within a broader context and not as a theoretical question, the resulting comprehension tends to be increasingly critical and thus constantly less alienated. Their response to the challenge evokes new challenges, followed by new understandings; they gradually come to regard themselves as committed.’

Freire maintains that education is not reducible to mechanistic methods of teaching. In contrast to the transfer model of education (of facts and skills), a Freirean class invites students to think critically upon subject matters, doctrines, the learning process itself, and society – that is, the context these are situated in. The teacher poses problems that derive from student life, social issues, and academic subjects, in a mutually created dialogue with

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390 Idem, pp. 68-69.
students. Methods that render students passive and un-reflective are rejected. The critical approach of this teaching method challenges teachers and students to question their existing knowledge, as part of an attempt to identify the appropriate mind-set for citizens in a democracy. In this case students, unlike in the banking approach, are not prepared for a life of political alienation. Overall, in Freire’s philosophy:

[education is] one place where the individual and society are constructed and a social action which can either empower or domesticate students

Unlike educators in the ‘banking’ model, Freirean educators instigate a research-orientated approach to knowledge. They present students with critical problems, treat them as multidimensional and substantial human beings, and promote inquisitiveness and activism in regard to knowledge and the world. An awakening of critical consciousness takes place through the investigation of ‘generative themes’. These include cultural or political issues that are of great concern and significance to learners in the Freirean class. By investigating such themes students are encouraged to engage in class discussion and make their own contribution.

The problem-posing method does not dichotomise the role of the teacher into either ‘cognitive’ or ‘narrative’: it is always cognitive, whether preparing a project or engaging in dialogue with students. The teacher does not regard cognizable objects as something they own, but as the object of reflection for both him or herself and students. The students are critical co-investigators, in dialogue with the teacher. The teacher assumes the role as problem-posing educator to create, along with the students, the conditions under which knowledge at the level of doxa (δοξα, meaning arbitrary, authoritatively superimposed knowledge that serves certain objectives) is superseded by true knowledge, at the level of logos (rationalised, justified and universally verifiable).

In the Freirean approach, problem-based education is a humanist and a liberating praxis, one that enables both teachers and students to become equally the ‘Subjects of the

391 There may be a concern raised on how this is not going to lead to a state of idle curiosity. In fact, Freire’s students are not ‘observing’, ‘studying’ and ‘working on’ other worlds than their own, risking to slip into something close to Orientalism. They are actually in (their own) world, which they intend to change. By ‘Orientalism’ we mean the West’s patronising cultural representations of ‘the East’, the societies and cultural phenomena of the Middle East, North Africa and (by extension) Asia. In his 1978 book Orientalism, Edward W. Said, Professor of literature at Columbia University and public intellectual, claimed that this homonymous (intellectual, academic, cultural) attitude is inextricably tied to the imperialist and colonial past of Western societies. The book is renowned as the foundational text for the academic field of postcolonial studies.

392 In our times, the risk of political alienation may take the form of a pseudo-participation.


394 More on this in: Paulo Freire, op. cit., p.86 and pp.93-94.
educational process by overcoming authoritarianism and alienating intellectualism”. It also enables learners to overcome their false perception of reality: the world becomes the object of transforming action by people who, in doing so, are humanised. Formerly passive students discover, through experience, that reality is in a process of constant transformation. Individuals become researchers and, by acknowledging that their ontological vocation is to self-humanise, they engage in the struggle for liberation.

4.4.2.1 The teacher-student relationship

Freire claims that domination of the oppressed is reproduced in school and is reflected in the teacher-learner relationship. Thus, the raison d’être of liberation education lies in remedying this student-teacher contradiction. This account of the student-teacher dichotomy is not an original one: it is discernible in the work of both Dewey and Rousseau. In the framework of liberation education, it is possible for teacher and learners to be reconciled, since both parties become simultaneously students and teachers. Teachers are open to learning from the situation and from the learners’ own lived experience. Likewise, students assume the role of the teacher in that they take responsibility for their own learning process and for the subject matter, by actively participating in the treatment of generative themes. This justifies the common saying, that while the ‘good university’ has instructors and learners, the ‘great university’ has only learners. Hence, liberation education, via the problem-posing model stimulates the critical faculties of both students and teachers and is not content with a partial view of reality but always seeks out the ties which link one problem to another.

The reciprocity between students and teacher that this model seeks to develop is an act of acknowledgment of the fact that people are incomplete. According to Freire, this ‘authentic’ approach to education allows people to be aware of their imperfection and, as a result, strive to be more fully human. Consequently, students and teacher develop co-intentionality (mutual intentions), hence making the learning process a concern for both parties rather than just one. This, in turn, helps overcome the alienation between the two parties. Co-intentionality, asserts Freire, begins when the teacher introduces a problem for enquiry related to a key aspect of the student experience so that students see their thought

397 In: Dreyfus, L. Hubert, On the Internet, p115.
398 Paulo Freire, op. cit., p59.
399 Apparently, at this stage, students are not expected to conceive or empathise with problems of another, distant world. Becoming aware of the issues at stake in another part of the world is a different educational challenge that would aim at combating the risk to develop a sense of ‘idle curiosity’ and/or an attitude of Orientalism.
and language\textsuperscript{400} (subjectivity) reflected in their study. It is worth noting that Freire distinguishes the authority of knowledge from the professional authority of a teacher. The latter is seen to infringe on the freedom of students.\textsuperscript{401} In the liberation education, the educator refrains from the pseudo-security of his hypertrophied role, and seeks to live with others in solidarity. Solidarity requires true communication, usually avoided and feared in the traditional model of banking education. Yet, only through communication can human life retain any meaning. The teacher’s thinking is authenticated by the authenticity of the student’s own thinking. The teacher cannot impose his or her own thought on students, nor can he or she think for them.

4.4.2.2 The role of the teacher

As far as the teacher’s role in liberation education goes, despite the proposed reciprocity in the student-teacher relation, Freire maintains that there is a difference— the two are not on equal footing. He describes the roles of the participants in the classroom as the teacher-student (a teacher who learns) and the student-teacher (a learner who teaches), and thus comes close to suggesting the teacher-student dichotomy ought to be abolished. (This pedagogical relationship has also been discussed analytically in section 2.8.) However, it is worth raising a point about the accceptable asymmetry between student and teacher, which seems to be a point of convergence Hanna Arendt’s view. In her only essay\textsuperscript{402} on education, ‘The Crisis in Education’, Arendt stressed the particularity of the teacher-student relationship and how it is exceptional to any other human relation, in that the teacher’s role lies in assuming an unparalleled responsibility for the world which she must introduce the learners. The teacher is not ‘innocent’ – not ignorant – because she is already part of the world. For this reason, she has to re-discover it through re-negotiation with learners, rather than simply presenting her own account of the world.

Often, educators in higher education do acknowledge the role of the teacher as learner: many confess that one of the biggest benefits of the profession is the sense that they are constantly at the cutting edge of (professional) knowledge. This is of particular importance for instructors in architectural education, who hardly ever have a formal education as

\textsuperscript{400} The origins of this idea are in the Aristotelian definition of man as reasoned and political animal. The human essence takes meaning only in relationships with the others: human identity is socially constructed.

\textsuperscript{401} Paulo Freire, loc. cit.

\textsuperscript{402} Hannah Arendt, loc. cit.
educators and who, in most cases, are professionals. The interaction with students and their fresh approaches to the subject is often credited as a reason for this.  

4.4.2.3 Implications for architectural education

A more in-depth explanation of the appeal that the teaching profession has for architects is suggested by Donald Schön. His analysis of the design studio demonstrates how the studio instructor operates: some instructors have learnt to become not only master practitioners but master coaches. This consists in having learnt to respond to imperative, present situations in the studio rather than in practice; to make design assumptions, strategies and values explicit. They have learnt to deal with paradoxes and predicaments that arise whenever students try to acquire competencies which they perceive as radically new. They have become familiar with the various uses of types of projects, strategies of description, and styles of demonstration and criticism. According to this analysis, the architect who works also as instructor in an architecture school, unlike the architect-practitioner, will over time acquire a capacity to make explicit, and even to articulate by means of reason (logos), how architectural design is conceived and processed – specifically due to teaching activity. This competency, which leads to an easiness in design, places the instructor of architecture in an advantageous position when compared with a non-teaching practitioner.

Further empirical research into studio teaching could explore whether this type of knowledge, which derives from the teacher-as-learner status, is disinterestedly shared with students. In other words, to investigate whether this teacher-as-learner actually assumes the role of the teacher of a Freirean class. An investigation into the extent to which students have an active role in their educational process (sharing responsibilities, etc.) would shed light on this issue. However, Schön gives indicates that it is not the case. He observes that, more than other practitioners, architects tend to mystify their artistry, treating it defensively as an indescribable something that ‘either one has it or not’. Moreover, he argues that design tutors’ difficulty to systematically self-reflect has a negative effect in this regard. This generally impedes them from giving explicit, accurate and useful accounts of the assumptions that are implicit in gradually learned competencies, and have finally become intuitive. Elsewhere, research on architectural education from a sociological perspective has proposed the purposeful perpetuation of an ideology of giftedness, which is corroborated  

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403 Peter Cook, in his development of the opposition argument in the debate, emphasised the idea of the instructor being inspired by the educational atmosphere. In Appendix 1: Peter Cool [06:40/34:41], Opposition, p.250.


405 Garry Stevens, loc. cit.
by critical discourse from Pierre Bourdieu and the concepts of habitus and hidden curriculum, and the analysis of the university’s function of privileging the culturally advanced.

Furthermore, contemporary architectural education tends to be problem-posing orientated. This is particularly evident in design courses. This approach is credited with encouraging the development of critical thinking in students and with creating suitable conditions for developing broader understandings of issues and their contexts. However, liberation education, through problem-posing, intends to stimulate the critical capacity of both students and teachers and even extend the breadth of their perception of reality, by linking one point to another and one problem to another. This indicates that architectural education already shares fundamental objectives with Freire’s theory, such as encouraging students’ capacity to connect multiple views of reality. This congruence strengthens the proposal for another line of field research in architectural education: investigating how this objective can be better achieved and by which alternative conditions.

It would also prove beneficial for architectural education to investigate established forms of teaching, where ‘memory’ or any equivalent to it (in the sense of an intense drive to accumulate information) which, disconnected from a context and presented dogmatically as norm, is favoured over an experiential way of learning by immersing oneself in the world. The examination of different didactic tools might prove effective for different functions of learning.

Another topic that merits further investigation is the potential effect of antagonistic relations and an emphasis on individuality in the enculturation of young architects on the learning outcomes of the promoted culture of competitiveness. These features are often observable either in established educational procedures (i.e. the crit) or in architecture schools’ self-presentations and advertisements. These characteristics can be epitomised by the virtue of ‘leadership’, in the promotion of the architects’ role as leaders and in the ideal of individual success in the context of architecture’s star-system. At the other end of the spectrum lies the Theory of Education for Liberation and its ideals of solidarity, conscientisation and humanization.

4.4.3 The limits of the Theory of Education for Liberation

In this section, I will explore the limits of Freire’s theory by revisiting his arguments as well as those from other theories which provide similar insights into, and criticism of formal education – particularly the work of Pierre Bourdieu.

406 This issue is treated in texts of M. Bandini, H. Webster, C. Crysler, The Boyer Report, G. Stevens and T. A. Dutton.
Freire’s theory of Education for Liberation shares its view of the function of conventional formal education with that of the work of Pierre Bourdieu and Jean-Claude Passeron (as it is presented in their book ‘Reproduction’ which was released in France around the same time). This view holds that formal education, far from being an institution that enables social transformation, plays a role in reproducing social inequality by further privileging those who are already privileged and subjugating those who are not. Bourdieu and Passeron describe this as ‘domination’ while Freire calls it ‘oppression’.

Bourdieu and Passeron introduce the notion of cultural capital and claim that it plays a critical, and yet implicit, role in higher education. Their claim is that students are subjected to an educational mechanism that privileges those with an inherited cultural predisposition, leaving others from subjugated classes behind. In this way, education consolidates the domination of the middle and upper classes, at a symbolic level. Freire, on the other hand, argues that oppression is inherent in the ‘banking’ model of education and, as is reflected in the authoritarian relationship between teacher and student, is internalized by the oppressed. Critical pedagogy is Freire’s didactic approach to resolving this problem, consistent with his theory of Education for Liberation. He holds that education ought to begin with the lived experience of learners and subsequently nurture dialogue between teacher and learners. The approach involves withdrawing from institutionalised, formal education, and instead bringing education to communities, neighbourhoods and villages. The idea is to reveal and motivate the ‘good sense’ that remains within the oppressed, to counteract the internalised oppression and, finally, to liberate.

I will now discuss Bourdieu and Passeron’s criticism of Freire’s Education for Liberation, by drawing on Michael Burawoy’s essay ‘Pedagogy of the Oppressed: Freire meets Bourdieu’. According to Burawoy, Freire’s approach received serious criticism from Bourdieu, and his sociological approach, for being a separatist solution, in that it mostly underestimates the power of ideological hegemony. Bourdieu and Passeron criticise this approach for being ‘populist’ and misguiding a number of other similar approaches. More precisely, they claim that to attempt to challenge domination by withdrawing the oppressed from the official educational system and setting up an alternative one will do nothing but consolidate the current symbolic domination of the privileged.

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407 Michael Burawoy is professor at the U.C. Berkeley Department of Sociology. He is the author of a number of imaginary conversations with Pierre Bourdieu, among which is the one with Freire, as starting points of dialogue. Michael Burawoy, V: Pedagogy of the Oppressed: Freire meets Bourdieu [online]. Berkeley, CA, 2011. Available from: burawoy.berkeley.edu/Bourdieu/6.Freire.pdf [Retrieved 29.06.2017]
408 Ibid.
In addition, they object that this approach deprives those most in need of the benefits of the dominant culture. Their claim is that those armed with the best intellectual credentials will inevitably occupy a better position within their culture. As such, they argue that it is misguided to suggest that the oppressed ought not to strive to attain such credentials. For, if the oppressed are able to do so, they have the opportunity to undermine the symbolic domination (in Freirean terms, the internalised oppression) of the privileged and thus unmask the inequality inherent in individuals’ cultural preconditioning. Overall, as Burawoy states, their criticism holds that the Theory of Education for Liberation, although it acknowledges the social function of formal education (perpetuation of oppression), fails to recognise the technical function of it (inculcation). Essentially, it is condemned for letting down the disadvantaged who, deprived from the credentials that are necessary for survival (obtained through conventional education), are at risk of being driven to the bottom of society.

Burawoy compares the analytical frameworks of both sides. Bourdieu and Passeron, approach the issue from the background of socio-analysis, and draw on the distinction between symbolic domination that is observed in the metropolis (France) and the kind of physical domination found in the colonies. Freire, on the other hand, by making the distinction between internal and external impression, is drawing from psycho-analysis, and hence thematises the introjection of oppression into the psyche of the oppressed.409

Both of these approaches can be seen as partial, covering each a different section of the analytical spectrum, and thus offering a different conceptual framework for understanding the common educational reality. For that reason, it is worth paying attention to both. However, what is of particular interest to this thesis is the rare trait that Freire’s theory presents of linking pedagogy (philosophy) with a specific didactic approach that is deeply rooted in psychology.

4.4.4 Freire’s connection with Dewey and Dreyfus

As I mentioned at the beginning of this chapter, Paulo Freire belongs to a triad of philosophers – along with John Dewey and Hubert Dreyfus – that informs the arguments of this thesis. In Freire’s Theory, it is possible to identify features of Dewey’s pragmatist concept of experience and Dreyfus’ notion of commitment and involvement.

Freire, in his account of conventional education, emphasises specific characteristics that are of key-importance to the function of this system. Alienation is one of them, which he

409 Idem., p. 6.
finds in the state of the oppressed within the ‘banking model’ of education. It is defined as the feeling that one has no connection with people around them. Another definition is ‘a withdrawal or separation of a person or a person’s affections from an object or position of former attachment’. Other meanings include: isolation, detachment, estrangement, distance, turning away.

As Freire observes, the conventional, oppressive educational model ensures that dominated individuals remain in a state in which they have absolutely no control over their learning process. They are alienated and, without hope of change and meaning, become passive and adaptive with regards to their education. In essence, the oppressed find themselves estranged from the content and meaning of their education. The reason is that what their education is really doing is imposing on them another culture – that of the dominant classes – with objectives and interests besides their own. By the term alienation, Freire obviously intends to express the wide spectrum of situations of the oppressed, which, as we have already seen, includes: isolation of consciousness, suppression of context, domestication, naturalisation of domination, passivity, withdrawal. In The Pedagogy of the Oppressed, Freire actually produces the antidotes to these situations: empowerment, awakening of critical consciousness (coined as ‘conscientisation’), active involvement in the transformation of reality. He opposes adaptation and passivity – uncritical and unreflexive conditions – and calls on learners to be restless, impatient, and to engage in hopeful inquiry for knowledge and truth. This represents a call for commitment and active involvement in education. Commitment is a critical concept in this alternative process of education, informed by the Theory of Education for Liberation. It refers to the requirement that the taught actively participate in and engage with their education, assuming certain responsibilities for it.

Alienation, as a condition of the banking education described by Freire, is associated with Hubert Dreyfus’ translation of Kierkegaard’s notions regarding what he sees as the disinterested deliberation and the idle curiosity of the present age. In this (phenomenological) view, alienation is the result of the provision of de-situated information – in the place of knowledge – which shapes detached, equally de-situated learners. Under this condition learners overcome personal involvement in issues and are able to approach a ‘detached’ world without the need for immediate or direct experience. This means that any information or issues are positioned at an equal distance from the learner; nothing is closer (i.e. more

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personal) than anything else. As a consequence, learners are unable to make any distinction between what is important and meaningful, and what isn’t. Freire claims that conventional education is a-political in nature. In relation to this claim, we might consider the concept of the transformed, modern Public Sphere that Jurgen Habermas distinguishes from the ancient πόλις or the res publica which it perceives itself out of the political power.

It should not be surprising to learn that Freire’s proposed antidote to alienation, namely the learners’ commitment to the project of their education, is also associated with Dreyfus’ idea of involvement. Commitment is key to the development of the learner’s lived experience. Commitment and lived experience are what make issues differ in terms of how they are viewed by learners; for example, whether they are more or less personal. Importance and meaning, as well as the capacity to make meaningful distinctions are, thus, restored to education. Dreyfus claims that our commitment, and, more precisely, our emotional involvement with issues, enhances not just learning but the acquisition of competence. It also enables us to obtain the best grasp of reality, by forcing us to taking risks that ultimately attribute meaning to our life.

Finally, I claim that Freire’s emphasis on acknowledging the lived experience of students recalls John Dewey’s concept of experience. Following the constructivist notion, educational experience is created in the learning situation, in which new knowledge is formulated and, in turn, new experiences arise. In Dewey’s pragmatist view, experience needs to have educational value, which, goes towards creating the foundations on which new knowledge can be built.

Within Freire’s education for liberation, formerly passive students discover, through experience, that reality is in a state of constant transformation. Learners become searchers and, by acknowledging that their ontological vocation is humanisation, engage in the struggle for liberation. It is essential to emphasize that by ‘experience’ Freire means the existential experience of the students. Acknowledging students’ pre-existing lived experience, Freire acknowledges students’ cultural capital as a starting point. As Freire suggests in his work, for the teacher to take into account the students’ existential experience, and for the students to acknowledge and bring it to the surface, is a dignifying process – it humanizes them. Moreover, with the students bringing their existential experience into the learning process, in the class, two things are achieved. The first is a higher degree of communication and socialization, encouraged by engaging in dialogue. Dialogical action,

[412] This is analysed in the later part of the thesis, in chapter 5, section 5.4.3.
[413] Idem., chapter 5, section 5.6.
[414] Drawn directly from the learners’ own lives, experiences, and thoughts.
[415] What’s more, it is not necessary to be problems of ‘another world’.
according to Freire, is characterised by cooperation, unity, organisation, and cultural synthesis. The importance of communication and socialization can be traced back to Aristotle’s ontology of the man as a reasoned and naturally political animal. The substance – that is, the identity of learners – is constituted within relationships: both thought and language have no meaning if not in the context of relationships with others. The second achievement of the dialogical process is a radical intervention in the student’s relation to the world: the world is brought into the class in order to reaffirm individuals’ commitment to learning with the world, in the world. Finally, dialogue no longer takes place between intellectuals and the oppressed, but rather between action and reflection, and thus the field of this dialogue is experience.
Chapter 5
Republic or Solitude?
Pragmatism and Phenomenology: on two aspects of the ‘real’

Meaning Making in the
Design Studio and Live Project
Proposing a pragmatist and a phenomenological epistemology
for Architecture’s Descriptive Didactics
5.1 Introduction

In the previous parts of the thesis, in chapters one and four, we have directed focus on the two paradigmatic cases of discussions at the extremes. By distinguishing between arguments of either the pedagogical or of the didactic order in the discussions of architectural education, we were able to observe the emergence of a fundamental question about the primacy of either the socio-cultural contexts or even of the inner creative self over learning and meaning-making. From this general question stem different aspects of the enquiry, among them the ways in which architecture can be better taught and learnt, and of optimal didactic approaches and tools, etc. The question was articulated as follows: ‘is architecture better learnt in Republic or in Solitude?’

Providing the title for this chapter, the very wording of the question is borrowed from the title of a poetic work by Greek poet Costis Palamas ‘Η Πολιτεία και η Μοναξιά’ [He Politeia kai he Monaxia], published in Athens in 1912, and translated as ‘The Republic and Solitude’. In the introduction of the book Palamas wrote:

The poet happens to be inspired, line after line, and according to his tempo, both by the life of the fellow people around him and by the life of his solitary inner self. The surroundings hit him straight to the heart as if they were his own. He lives his own and grows them big from what surrounds him. The poet is, depending on the circumstances of his life, both crowing and echo. The Polis and the Solitude are sometimes Lamias and sometimes Muses. It is not in his hands to choose the songs. His song is, on a large scale, written by fate. The word of the poet is the clarion call either upon the merits of the Polis or upon its scarecrows. The word of the poet on the other hand is a monologue pulled out from his Solitude, something which is often incongruous and antisocial, standing contrary towards the Polis. But the poet, if his song is to work the idea of the Polis [his mother] needs Solitude. And in order to enjoy the dream-fed children that Solitude [his spouse] gives birth for him, he needs the Polis.

Freedom has been the fundamental principle and moving power of what we know today as Western civilization. We may also add as coequal – although more recently claimed – the principle of social justice. The primacy of either freedom or social justice dominated most of

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416 Κωστής Παλαμάς, [προλογικό σημείωμα] (1912), Η πολιτεία και η μοναξιά, Άπαντα, τμ.5, Αθήνα, Μάρτιος 1972. Costis Palamas presented this work in Athens of 1912, in the context of the rising growth of the city (πόλης) at the turn of the century, as this reflected on his own developing urban consciousness. In this work underlies the effort to reconcile his perceptions of the city’s shiny cultural heritage with those of a subordinate present. Θεοδώρα Μέντη, ‘Η πολιτεία και η μοναξιά: Η Αθήνα του Κωστή Παλαμά’, Πρακτικά Γ Διεθνούς Συνεδρίου Η ποίηση και η ποιητική του Κωστή Παλαμά, Αθήνα, Ίδρυμα Κ. Παλαμά 2016, σ. 467-481.

417 My translation. I am using here the word Republic with the meaning of a locus of the Res Publica (in its generic meaning: of the public affairs), translating the Greek concept of Πολιτεία (Politeia) as the extended meaning of Πόλις (Polis) - the city rather than the state. In modern Greek, Πολιτεία can mean both, the city and the state.
the ideological, ethical and political debates and conflicts during the twentieth century. The Cold War between the East and West could be seen as a manifestation of this dichotomy. Still, today we are left staring at the two statues, the statue of liberty and the statue of social justice – which stand in opposition to one another frowning – unless we receive the message of those who insist that the limit of freedom is justice and the limit of justice is freedom, the right of a person to exist in society, thus bridging the distance between the Polis and the Solitude.

This chapter examines the implications of the discussion at the extremes on the plausibility of a descriptive didactics specific to architecture. The two (antagonistic or symbiotic) didactic tools of contemporary architectural education in the U.K., namely, the studio and the live project, are considered as architecture’s teaching and learning phenomena. Against the background of the rhetorically articulated question ‘Is architecture better learnt in Republic or in Solitude?’ the chapter explores processes of meaning making. The objective is to propose a component of descriptive didactics for architecture, so that future choices upon didactics can be coherent with theory (pedagogies). The method of enquiry employed in this part of the thesis is philosophical explanation. It is used to investigate the logical, theoretical and philosophical presuppositions and consequences of architectural education.

To this end, the chapter draws from two theoretical frameworks – pragmatism and phenomenology – in order to offer an alternative critical reading of architecture’s two didactic tools, and hence, to propose a hybrid model that bridges the qualities of the two paradigms. From the standpoint of pragmatism, the chapter revisits John Dewey’s concept of ‘experience’ and from a phenomenological perspective, the chapter translates the Dreyfus model of skill acquisition, in order to re-interpret key-concepts such as ‘reality’, ‘real world’, ‘experience’, ‘apprenticeship’, and ‘meaning’. For the translation of the two models into the context of architectural education, the thesis used descriptive data regarding the two didactic tools, and drawn from valid existing research. Basic sources of such data consisted of the following: (i) texts about the design studio of architectural education by Donald Schön, (ii) the PhD dissertation ‘Concept creation in the design studio’ by Nelly Marda, (iii) the PhD dissertation ‘Between studio and street: the role of live project in architectural education’ by

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419 Nelly Marda, Architectural concept formation: transmission of knowledge in the design studio in relation to teaching methods. Thesis (PhD), Bartlett School, Faculty of the Built Environment, University of London, 1996.
5.2 Dualities in the treatment of this thesis

In the preceding parts of the thesis, concepts, relations and qualities referring to architectural education were often discussed, sometimes becoming evident to us in terms of characteristic dualities. For instance, in Chapter one we discussed the general idea of binary oppositions, particularly in reference to the notion of ‘extremes’, as an inherent property of human cognition. This is not new. Since Aristotle and Heraclitus, and later through Hegelian Dialectics, our understanding of things has become shaped by contrasting forces (contradictions). It is under this light that we can see a number of apparently obvious dualities that dominate the discussion, for instance, individuality–society, self–other, learning in School–learning in the Office, etc. We could continuously receive a plausible questioning about the validity and the conclusiveness of such discussion, when its terms are expressed in dualities. This could easily be considered a simplistic and even a reductionist approach to the discussion. For these reasons, since the discussion of the following part will be structured around an analogous duality (‘in Republic or in Solitude’), I would like to review a few arguments about the possible value of seeing things in terms of oppositional dualities, before proceeding to talk over it.

It is claimed that thinking is always implicitly dual, whether the basis of thought lies in language, in images, or in conflicting motor responses. It is also suggested that the implicit duality of thinking ought to be taken into account when we develop a philosophical, dialogic account of the phenomenon under study.

Recognizing the principle of the implicit duality of thinking would result in the modification of arguments that pertain to absolute idealism and bend progressively towards relativism. For instance, the argument that claims coincidence between reality and experience is most vital to idealism. In the sense that our experience can be thought of as both denotative and connotative, it seems that reality and experience are coincident, in which

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421 Benedict Brown, *A critique of the live project in architectural education*, Thesis (PhD), School of Planning, Architecture &Civil Engineering, Queen’s University Belfast, 2012.
423 Indeed, Albert Einstein in a testimony on his thought patterns claims that: ‘the words or the language as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities, which seem to serve as elements in thought are certain signs and more or less clear images, which can be “voluntarily” reproduced and combined. ...The above-mentioned elements are, in my case, of visual and some of muscular type’. In: Jacques S. Hadamard, *A Mathematician’s Mind: Testimonial for An Essay on the Psychology of Invention in the Mathematical Field*, Princeton University Press, 1945.
case we would not need to go to an Absolute experience beyond our own. As George Conger elaborates:

That which is known only denotatively is always at hand to be transformed into that which is known connotatively – no one need weep for more worlds to conquer.\(^\text{424}\)

The principle of the implicit duality of thinking provides room in the region of denotative knowledge for indefinite growth. What is known only denotatively is always at hand to be transformed into that which is known connotatively – this is the role of dualities in perception and thinking. Hence, the duality is productive and creative as ‘It makes possible a growing cosmos and growing men’.\(^\text{425}\)

In order to establish the principle of the implicit duality of thinking, Conger goes on to explain how perception is selective. This view holds that one perceives an object always in relation to a milieu – the object of our attention exists against a background. Although one may not pay attention to the background, the latter remains the *sine qua non* condition for one to see the object of attention. If at any moment one widens the field of vision and consequently includes another object that up to that point was part of the milieu, then, at this new moment, there is still a remaining background defined anew, which in its turn makes for the condition of one’s seeing within the new field. The duality is always there, consisting of the object of attention on one hand, and of the ever-redefined background on the other. The implicit character of the duality lies in its potential of being perceivable at any moment rather than being explicitly perceived. Conger summarizes this as the condition of seeing an object ‘*a*’ at any moment only because one is able to see its background as a ‘*non-a*’.\(^\text{426}\)

To explore further the condition of seeing in oppositional dualities, John Dewey claims that thinking is nurtured by ‘specific conflicts in experience that occasion perplexity and trouble’.\(^\text{427}\) For Dewey,\(^\text{428}\) the conflicting situation polarizes or dichotomizes itself. On one hand, in the conflict of incompatibles there is some ‘untouched part, representing the secure and unquestioned’, and on the other, there is the doubtful and precarious. The field is then divided into ‘facts’ (the given, the presented, the Datum) and ‘ideas’ (the ideal, the

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\(^\text{424}\) George P. Conger, *loc. cit.*

\(^\text{425}\) Ibid.

\(^\text{426}\) Ibid., p.225.


conceived, the Thought). As Dewey concludes, “it is this conflict, unique and irreplaceable”.429

In the following part, this thesis attempts to trace these learning processes in architecture also by discussing the terms of the duality ‘in Republic’ vs. ‘in Solitude’, as they reconstruct the common, core-question that was uttered in the developed discourse, and in the two cases of the discussions at the extremes, presented in chapter one.

5.3 The meaning of meaning in terms of Republic and Solitude

As has already been set out in this thesis, debates about architectural education usually resonate through their paradigmatic representative – the discussion at the extremes – a fundamental question, about the primacy of either the socio-cultural contexts or of the inner creative self over learning and teaching in architecture.

This question gives rise to different aspects of the enquiry: How can architecture be better taught? And by what didactic approaches, tools, etc.? What are the best conditions for learning architecture: In the well-defined area of an educational institution (studio, laboratory, etc.) or out in the world (office, practice, live project, etc.)? Before proceeding with any attempt to provide answers to these questions, and in anticipation of possible misunderstandings, we need to take into account a fundamental dimension of the learning process, or of knowledge acquisition: the making of meaning.

Traditional theories of knowledge expressed a static model of learning. They implied that learners were an undifferentiated body and suggested that the teacher possessed something that students didn’t have. Most educational theories of our time have stressed the learners’ active participation in learning. Educational research during the twentieth century has focused on the processes that learners use, more than on the material to be learned. Inevitably, they have come to the conclusion that humans interpret data the senses provide, and that these personal interpretations, i.e. meaning making, are pedagogically significant. This activity is independent of any particular educational theory. Anyone who believes that there is a single, correct way of learning something, a most efficient approach to learning a subject or that one must start at point alpha and end at point omega in a learning sequence, choooses to put less emphasis on individual meaning making and more on pedagogy based on other principles.430

429 Ibid.
Meaning making may be described as a process by which humans achieve understanding: we interpret the objects of our experience and attach meanings to them. Meanings arise out of the more profound experiences that have accumulated through time.\textsuperscript{431} Even scientific information is not exempt from human interpretation. Therefore, when different people adopt opposing views, this is not a question of knowing and not knowing, but rather a question of giving different interpretations. There are many layers of meaning, from the more personal, distilled from an individual’s unique set of experiences, to those inherited from the experience of a culture as a whole.\textsuperscript{432} If meaning is the result of the way we interpret the objects of our experience, we would be right to assume that a presupposition for the commonness of meaning is the commonness of the experience: the experience of something, the meaning of which is in question, must be shared. Meaning is acknowledged as common as long as different people are acknowledging something as the same to all. Conversely, an experience that is unfamiliar to more people cannot contribute to common meaning. When the experience is identifiable among different people, the meaning to which the experience contributes is also identifiable. Hence, the meaning is identifiable and recognizable by at least more than one subject. As an artefact, even from its conception, architecture may be seen as either the expression of the architect’s intentions or the bearer of meaning addressed to a wider group of people. Things ‘\textit{are}’, depending on the meaning attributed to them, therefore architecture itself – the designed space and objects – obtains its ontological or existential properties depending on the meaning that it succeeds in bearing. Indeed, what really ‘\textit{is}’ something, i.e. a feeling, the fear, a scream, etc. is related to the meaning attributed to it. Architecture, like all forms of art, is about making the ‘private’ public or, to put it in different terms, about contributing to the common or universal meaning by departing from the privacy of consciousness. In the context of architectural education, we may address such issues as the inception of an architectural idea and the preoccupation or the intention of the architect-student to create meaning. In other words, the question is whether the designer conceives an idea based on influences from the objective world (the external reality) depending on elements of shared experience, or by relying upon internal processes of meaning making and imagination. In each one of the above different cases, the objectives, methods and contents of education are expected to be different.

Suppose that a design project has been assigned to a design studio. The perspective from which it can be examined varies because the experiences of participants differ. The

The studio tutor may take the perspective of the past, based on past experiences and shared, established meanings that derive from them. A novice student may adopt a different perspective, engaging their imagination in an attempt to conceive something in the void of experience. All may be able to reconstruct a past in the same way as they may represent aspects of reality. Yet the past may appear different or uncommon for everyone, as well as its representation, if the common experience is missing. As such, it is fair to assume that when the lived experience is missing, the reconstruction and representation of reality will be different in terms of each other.

We can claim that there are distinctive forms and layers of meaning that need to be dealt with in architectural education, and that these share much with arts education in general. The objectives of architectural education are, on one hand, the development of specific forms of thinking that are the most appropriate in both the creation and perception of objects and conditions, since they pertain to a distinctive architectural order more than any other (scientific, anthropological or philosophical, etc.) and, on the other, the provision of ‘architectural’ experience.

Following Eisner’s conception of meaning-making by representation in the arts, we can test the same model against the process of meaning-making in architecture. The stages in this case would be:

(i) Inscription of the initial idea (‘parti’), which we could assume takes place in solitary conditions, though we acknowledge the influence of the environment in the creation of the individual consciousness.

(ii) Editing, which involves negotiation, improvement and stabilization of the original idea – perhaps is taking place in solitary conditions, but always with the caveat that individual judgment has been greatly shaped, filtered and conditioned by social, hence public, norms.

(iii) Communication, a process that engages choices of common meanings and understandings and therefore has clear references to cultural (and other public) contexts.

(iv) Surprise, as a mechanism necessary for triggering inspiration and the inception of new ideas – referring to the inner process of the creator’s evolvement (apparently in Solitude).

As already discussed in previous parts of the thesis, learning architecture consists of attaching meaning to formal elements – of what can be included as the content in a

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curriculum of studies. It may also consist of ‘opportunities of learning that are part of the practicing of learning’. These may include the ways that people associate with one another within learning settings, various relations of interdependence between the work of people produced within the same learning settings, and the kinds of assistance they provide to one another, etc. Learning how to think in architectural terms along with the progressive appropriation by the students of the established and imposed parameters of the field – the constraints and affordances – signify the gradual participation in the world of shared meanings in architecture. This kind of meaning-making is what I consider as Learning in Republic.

However, in architecture, as in the arts more broadly, meanings are not limited to literal or numerical forms. Meanings can be represented and communicated through a whole spectrum of other forms. Besides, the activity of architectural design, comprising at the same time reflection, imagination and control, is a form of enquiry that depends, amongst other things, on qualitative forms of intelligence. Architectural education may be examined in terms of non-literal and non-numerical forms of meaning, such as those employed by E. Eisner in his analysis of arts education. For instance, Eisner refers to the necessity of comprehending highly nuanced relationships among the qualities one is required to work with and, additionally, he refers to the capacity of uttering judgments about qualitative relationships that depend upon one’s somatic knowledge (or ‘rightness of fit’). This advanced level of expertise, nurtured by one’s disposition to consult one’s somatic experience, is useful in perceiving and addressing qualitative questions, such as the following questions that anthropologists, literary travellers, writers and poets could answer in their work:

- What is the feeling of the space? Is it satisfying? Perceiving the Genius Loci (the spirit of place)
- Is there consistency between its constituent parts? Does it make sense? How will it be perceived? What is wonderful about it?
- How is it inscribed to an abstract idea / or, how is it the representation of an abstract idea? / How does a certain space embody an idea?
- What are the different types of experience of a space.
- Subtle properties and respective manipulations.

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435 Elliot W. Eisner, loc. cit.
437 Referred to as the tendency to obtain the best grip of the world by the phenomenologists of perception.
- Distinguishing between the Meaning or experience of an ambient vs. the standards of space.
- Experiential qualities of space vs. technical quantification of a space’s qualities.

This dimension of Architecture implies that among architectural education’s objectives are the refinement of students’ critical capacity with regards to qualitative relationships and their sensitization to the highly nuanced relationships that are at play in every architectural work. We could claim that acquiring sensibility, rightness of fit, and other advanced skills, expanding one’s consciousness, (re)shaping dispositions, satisfying the request for meaning in life, developing presuppositions for contact with the other(s), belonging as well as sharing a culture, is a matter of individual development, a process taking place not according to any established system of forms. This kind of meaning-making is what I consider **Learning in Solitude**.

### 5.3.1 In the Design Studio

As already discussed in the introduction of this thesis, for the most part of the twentieth century the teaching of design in architectural schools has been identified with the teaching of a suitable design method. Students, in order to be successful, had to follow someone else’s design example regarding this ‘suitable’ method. Although the method was changing overtime, depending on the dominant cultural and architectural paradigm, the concept of teaching architecture remained invariably about preparing and conditioning students to imitate a work model. Teaching by enculturating a valid way of working in architectural design implied that the student assimilated and, in some way, internalized the paradigm.

### 5.3.2 Acquiring understanding and constructing meaning in architectural education

Setting criteria for comparing and inquiring into differences between learning architecture in a state where influence derives from the environment (in this thesis we use the metaphor of ‘republic’), and in a state where the process is internal to the self (metaphorically, a state of ‘solitude’), for architecture students, the issue of meaning-making stands out. The term ‘learning’ in this particular context includes the process of embracing new knowledge, adapting to new conditions, as well as conceiving and creating new ideas. Whether learning is a process that relies upon external, environmental stimuli or internal and predisposed forces is under enquiry in this part.
In this context of learning, meaning-making is seen as the highest degree of understanding. For theorists of education, ‘making meaning’ in an educational milieu is a process by which learners advance understanding into construing, making sense of, and grasping broader relationships out of the acquired knowledge. For Tighe and Seif, understanding and making meaning [in the learning process] are inseparable objectives of education since:

They occur both when students explain and interpret ideas, put facts into a larger context, inquire into ‘essential’ questions, and apply their learning in authentic situations.439

Drawing from cognitive psychology research, it has become clear to researchers that it is the quality of acquired knowledge that differentiates between learners, from novices to experts. The key-differential being depth of understanding and construction of meaning, it would be fair to assume that the resulting reasoning can be transferred to architecture’s learning as well.

Researchers have agreed upon the insufficiency of even large bodies of factual or procedural information gained by learners, unless this knowledge can be transformed into ‘usable’ knowledge. And by the term ‘usable’, they mean knowledge applicable to contexts varying from similar to different, with regards to those encountered in the educational process. Among learners, those deemed as ‘experts’ not only possess a large body of domain-specific information but this same body is well organized and integrates knowledge of underlying concepts and principles, as well as of procedures. As a result, learners at the level of ‘expert’ think differently vis-à-vis a design problem. They demonstrate deep understanding of the subject matter, which enables them to apply what they already know to problems in new contexts (i.e. being able to re-frame acquired knowledge). At the other end, ‘novices’ may be gaining sufficient knowledge, but they are lacking in the conceptual frameworks of concepts and ideas that afford meaningful learning. In other words, what research driven by principles of cognitive psychology has made evident is that learning, in our case, architectural learning actually consists primarily of processes of meaning-making, and both teaching and learning should be tailored accordingly.

439 Idem., p.6.
440 Ibid. Findings are mainly from American studies, based on research undertaken in educational settings at primary and secondary levels that covered a total period of about three decades.
Since meaning-making in an educational milieu of such importance in architectural education, it is worth exploring the best conditions under which meaning-making can be fulfilled. More specifically, we need to explore:

1. Parameters, which affect meaning-making in each of the extremes of ‘republic’ and ‘solitude’.
2. How meaning-making is taking place under the conditions of the studio-project and the live-project, respectively.

With the problem-based or problem-solving approach to design traditionally remaining the educational model for architecture, we can presume that there is some degree of convergence within the presuppositions set by the above research conclusions. Indeed, architectural design’s core feature relies less on the transmission model, and the risk of unsuccessful knowledge transfer is respectively narrower. Educational research deriving from a different perspective, namely Achievement Research, was undertaken to test mathematics and science students’ achievements. Some of the outcomes may indicate patterns that could prove relevant to (or useful in the discussion of) architectural education, as argued in the following. One of the international studies correlated the students’ achievements, at the scale of country, with different curricular profiles. It concluded that in the United States, where curricula included too many topics and were highly unfocused, students performed poorly in comparison with other industrialized countries. High achieving countries, on the other hand, presented more focused and coherent curricula, something that has been associated with the enhanced capacity of students to build more complex understandings in mathematics and the sciences. Respectively, a design project, even from its very inception, could aim at students building more complex understandings by maintaining a coherent and focused developmental curricular offering. In the studio project, the various parameters can be a priori set by the tutors, who will be selectively emphasizing and augmenting the value of some while diminishing the value of others, always following a plan, or else, a chart of educational priorities. This is what John Dewey refers to as the staging by the tutor of an educationally purposive and meaningful experience for the students. Indeed, in the studio the ‘reality’ of the project can be ‘adjusted’ exactly because certain of the parameters can be assumed rather than really dealt with (i.e. alternately or combined, the client, the financial constraints, technical limitations, time performance, etc.) when others can be prioritized/outweighed for educational purposes (i.e. form creativity, functional and

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441 The ‘Third International Mathematics and Science Study’ (TIMSS) compared the results of 42 countries at three grade levels (4, 8 and 12). The outcomes discussed in the article of Mc Tighe and Seif, cited the Schidt, Houang and Cogan (2002), and Hiebert, Gallimore, Garnier et. al. (2003) published studies.
contextual comprehension, anthropological and cultural factors, etc.). Since studio architecture is incubated *in vitro*, control over curricular focus is more efficient, resulting in a process through which students are developing more complex and deep understandings.

In a live project, on the other hand, such control is less possible because there are – by definition – unescapable features of the design problem that the project challenges the students to solve. While students obtain, within this setting, a better grasp of a great number of practical issues connected to ‘real life’, and particularly because things cannot be staged for educational purposes, these numerous topics require the student’s attention, involvement and agency at the same time. This can make students’ engagement with certain parameters of the ‘whole’ rather superficial and even mechanistic, not to mention rendering the whole thing educationally highly unfocused. One could speculate that this situation may involve the risk of depriving students from building progressively more complex understandings, exactly for the reason that real-life (and real-scale) projects have different priorities than the educational projects. It can be considered a weakness in the live project that students are obliged to follow the non-educational ones.

Underlying the above comparison we find two debatable premises. One is the constructivist presupposition of learning that is taken for granted here: assuming that learning takes place in an orderly manner, by which new experience and knowledge builds up on previously acquired knowing *schemata*. Hence, in respect of this premise, we tend to value the adequate conditions in which such a process occurs – in this case, the studio over the live project. By common sense and empirical knowledge we assess the studio project as the form where the tutor is afforded the necessary tools to support the learning conditions of her class, selectively freed of real-life constraints. Respectively, we understand the live project to have the opposite characteristics. The second premise is a purist tendency in surveying the two didactical tools. We may find ourselves tempted to perceive the studio project as the interior’s didactic tool – as operating exclusively inside the protective walls of the School – whereas we see the live project as the educational format of the mass exodus from School, operating in its totality as if freed from any scholastic manipulation. However, in reality we can easily deem each one as a hybrid of the two conditions, most likely in different proportions of in-School and out-of-School. The purist perspective is adopted for practical reasons to facilitate analysis and make the differences evident.
Another outcome of a meticulous analysis of mathematics instruction in Japan, Germany and the United States\(^\text{442}\) strongly suggested that students achieve a higher level of performance when teaching aims at developing conceptual understanding in students. In this case, meaning-making consists of students personally extracting the rules and theorems, and explaining them themselves, after facing a problem-based approach to learning.

Similarly, in architecture’s studio project, teaching aims at developing a conceptual understanding in students, which constitutes a way of meaning-making. This is ensured by the problem-based format of the learning process. In the studio project, students discover, acknowledge and uncover for themselves implicit rules, principles and logic, inherent to the design process (it would be no harm to the truth if we accepted that this is essentially equal to performing architecture). Further, they articulate all of them by means of logos. I suggest that this process constitutes a way by which students actually approach meaning-making during learning in architecture. Here again, the difference between the studio and the live project lies in the possibility for agency that is left to the tutor: we may acknowledge less possibility in a live project setting, since other, most likely, non-educational factors are taking precedence. Moreover, the process presupposes that students exercise, to a certain degree, their meta-cognitive capacity: they reflect on the cognitive process, on how and why things turned out the way they did with regard to the particular learning circumstance. This is also part of the meaning-making process for students. Understandably, the process requires scholastic space and time, against the balance of a ‘real-life’ project as the live project.

A part of the educational research that has been referred to here (achievement research, research on instructional practices\(^\text{443}\)) targets phenomena in the context of instruction – therefore it addresses the condition of ‘learning with others’, or what we refer to in this thesis as ‘in Republic’. More findings from achievement research in mathematics and science indicate that when the curriculum and instructional practices direct students to focus on core ideas rather than on superficial facts and procedures, they are more successful in making sense of the mathematical or scientific content, in perceiving underlying concepts and in reframing the new knowledge in situations other than the ones offered in instruction – all suggesting that students are making meaning. Similarly in architecture, design projects that exceed conventional functional questions and subscribe to one or more core idea (essentially setting forth a specific “thematic umbrella”, usually uttered in the subtitle of the


\(^{443}\) What, in the terminology adopted in this thesis, would mean ‘descriptive didactics’. More on this subject has been discussed in chapter 3.
project’s title), would allow students to benefit by broadening their world-view, helping them engage with wider questioning that draws from multiple fields of knowledge - multiple scales other than architecture, and ultimately enabling them to see a bigger picture of relationships, patterns and causality. We could see two presuppositions for the inscription of core-ideas to an educational design project. First is the specific planning, and the setting out of goals and objectives – what we would see as a structured syllabus complemented by lesson plans – in order to achieve an educationally useful experience for students and allow them the necessary contact with the core-ideas mentioned above. The second is educational time, distributed with balance for each set goal.

If the studio-project is the feature where reality is staged in school for educational purposes (since education and not perfect practice is the priority), it is fair to assume that the educational choice of curricular focus on core-ideas for benefiting students is ‘natural’ to this didactic tool. An additional reason is that the studio-project can be a process-oriented didactic tool: here the process of enquiring, exploring and learning matters more than the end-product.

Similarly, because the live-project is oriented towards an end-product that the student’s work has to accomplish (where even time is managed on the basis of realistic mandates), this didactic tool could be seen as less likely to become susceptible to non-pragmatist educational goals, such as ‘big’, core-ideas. However, practice has often demonstrated that this is feasible. Students in a live-project may become absorbed in intensive design and technical tasks when faced with the pressure to arrive at a tangible and widely accepted architectural result (usually a form of construction), with all of the particular characteristics of the live-project procedure. Scheduled meta-cognitive exercises, for example, may have a poor chance within the live-project time frame. Meta-cognitive activity by learners may involve the exploration of underlying conceptual frameworks and reflection on the application of acquired knowledge onto new situations. Such activity may be impossible in live projects for practical reasons. Focus on such realistic constraints, as time, cost, codes etc., may appear as less valuable or even destructive than the approach of investing time and energy into broadening students’ perspectives by a core-idea. This view is more compatible with a view of the two didactic tools in their purely contrasting positions: in the studio (in the school) we find the permission to exceed limits, whereas in the pragmatically determined live-project (in the practice) these are considered a superfluous luxury. It could prove useful to the discussion, though, to bring up the idea that such

stereotypical perception of two opposing didactic tools would just echo the purported opposition between school and practice with regard to the reproductive, educational duty.

Overcoming the stereotype and subsequent preconceptions, we could see that students in a live project circumstance can embrace and ‘live’ core-ideas in an implicit way. Teaching time in the studio project and openly engaging the core-idea can have its equivalent in the live project in the form of a living experience that goes hand and hand with working – provided that this has been arranged beforehand. Besides, a more permissive dichotomy of the two didactic tools would allow them to share in one another’s benefits. Indeed, we can find examples of this hybrid situation, which operates between the live project and a studio project.

Other findings of research on instructional practices in mathematics and science suggest that the adoption of an ‘authentic pedagogy’ by tutors encourages deeper understanding and meaning-making by students. The term ‘authentic pedagogy’ is used to describe the didactic approach of a tutor that is more idiosyncratic than typical (in terms of following a formal protocol). It implies the flexible, improvised, intuition-driven and caring teaching of individuals. This study has correlated the tutor’s authentic didactic practice with the creation of a more egalitarian atmosphere between students, thus allowing more of them to benefit from educational achievements. If we were to draw from any association with architectural education, we would have to point out that in architectural education there is already a lack of the typically formal didactic approach. This can signify a certain authenticity in the instructional practice, as much as just a dominant and a-typical pattern of teaching, traditionally perpetuated among tutors. The asset of this approach can be as simple as the deep interest and earnestness of the instructor in meeting students’ educational needs, and their determination to overcome conventional practices for the benefit of a more essentialist approach of the teaching work.

In conclusion, students make meaning when their instructors are committed to advance their work and become laborious, industrious and authentic. Whether this is achievable in conditions of the studio project or the live project remains to be discussed. Research also reveals interactive teaching as a factor in facilitating a meaning-making process by students, when compared with non-interactive teaching methods. Teaching is described as interactive when the class instructor creates situations in which students raise questions, develop problem-solving strategies, communicate and collaborate between themselves, are able to argue and reason their positions, and put forward their interpretations of the issues. In such conditions, meaning-making is obviously taking place, as students advance their involvement with the content by trying to test the validity of their proposals,
and finally reflect on their adopted approaches and strategies in an effort to improve them. As a consequence, students are becoming capable of reframing the learning situation within a broader frame of ideas, in order to apply their knowledge to different situations and contexts.

5.4 Phenomenology: The Dreyfus model of skill acquisition

Shifting focus away from meaning-making, the next part of the thesis intends to examine the teaching and learning phenomenon in architecture through the experiential perspective. To this end, the thesis is looking at the Dreyfus model of skill acquisition with the intention of translating it in terms of architectural education, and concluding with its contribution to a proposal for a theoretical descriptive didactics, specific to architecture.

The Dreyfus model presents an account of directed learning, where adult learners advance through distinct developmental stages, acquiring skills such as professional expertise and practical wisdom (the highest levels of skill acquisition) by means of instruction and experience. Five levels are designated as follows: novice, advanced beginner, competent, proficient and expert. A student at the stage of novice is expected to learn and follow maxims and rules that are context-free. During this phase there is no responsibility or any other form of attachment involved in the performance of the skill, except for observing the rules. Progressively, students achieve competence by accumulating experience and learn how to devise a plan or adopt a perspective of their own in their effort to accomplish a task. At this stage, students are subject to emotions generated in the process and by it: they experience elation as the result of success, fear because of the risks, and frustration due to failure, etc. This is something unknown to the novice. The level of expertise is reflected in the student’s capacity to perform intuitively and automatically, relying quasi-naturally on implicit knowledge rather than on analytical procedures.

Before getting into the details of the Dreyfus model, and its logic and implications for architectural education, I will focus momentarily on models and theory.

A model is a conceptual construct that intends to represent aspects of reality that are not easily perceived through ordinary experience. In other words, a model is an abstraction created for the purpose of capturing the essence of reality by highlighting some of its aspects. As Adolfo Peña writes, models attempt to describe, represent, explain and interpret the world.

and yet – by definition – they are partial and only approximations of the truth. Nonetheless, they are not fictional or conventional. They are conceived with the intention to represent their referents in an objective, truthful way and they are meant to improve and evolve towards better approximations and more accurate explanations. From the perspective of semantics, Mario Bunge distinguishes four kinds of representations offered by models, depending on the roles of the signified-signifier pairs: the factual-factual (or scale model), the factual-conceptual (a theoretical model), the factual-semiotic (a scientific text) and finally, the semiotic-factual (a text illustration). Within this categorization, Peña classifies the Dreyfus model as one close to the category of the factual-conceptual, else, a theoretical framing of skills acquisition by learners. Kerlinger defined as theory ‘a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena specifying relations among variables, with the purpose of explaining and predicting the phenomena’. In education, numerous theories intend to capture the teaching and learning phenomenon. They are generally categorised either as philosophical (and later, with the development of cognitive psychology, they tend to be referred to as non-cognitive) or as cognitive theories. Behaviourism, cognitivism, progressivism, constructivism, pragmatism, humanism and phenomenology, are just some examples. Models are conceived to mediate between the theory and its realisation or to test against reality. In the physical sciences a model is a causal explanation of the way certain variables within a system interact to result in a phenomenon. The model is linear in its organization and is a simplification, as only part of a total of variables which will be observed, measured or controlled for experiments. In the social sciences, on the other hand, causal and linear models (we tend to think of formal and mathematical models) have been questioned with regards to their validity as generalizability of human behavior is problematic in character. Overall, models are deemed plain and simple when compared with the social phenomena they are meant to represent and explain.

Returning now to Dreyfus, his model involves a theory of learning by providing a framework for identifying and understanding the competences that students of a specific


449 French sociologist Pierre Bourdieu is acknowledged for success in conceiving accurate models to coordinate with a theory articulation. The concept of habitus is such an example for Practice Theory.
field need to acquire. The model was developed from a seminal work by Dreyfus that reported analysis of detailed descriptions of US Air Force jet pilots’ instruction, under a contract with the University of California, in 1980. The original model was modified much later by the addition of two stages: a sixth stage of mastery and a seventh of practical wisdom. Soon after its publication, the model became widely adopted by domains such as medical education and clinical nursing education. Dreyfus’ work recalls quite systematically Benner’s study on nurses’ learning through the model’s stages. The study was exemplary, among other works, in its aim to provide descriptions and explanations of nursing and medical educators. Additionally, in discussing, from a critical perspective, the application of the Dreyfus model in clinical problem-solving skills acquisition, Peña mentions a number of cases to support that it has been accepted as relevant in the training of physicians. Overall, the model has been playing an important role in medical education, from modelling how physicians acquire clinical skills (i.e. in clinical problem-solving) to providing a framework of understanding medical competences and to influencing curricular design for residency training programmes. A characteristic example of the model’s unreserved approval, put forward by Peña, is its recommendation by the Accreditation Council for Graduate Medical Education. In recent years the influence of the Dreyfus model in medical education has started to be critically discussed by scholars in the field. The same would probably prove useful with regards to its consideration for architectural education, as this thesis proposes. The section of discussion at the following part of this chapter intends to treat this necessity.

450 Stuart E. Dreyfus and Hubert L. Dreyfus, loc. cit. Excerpt from the Abstract of the report: ‘We argue, based on analysis of careful descriptions of skill acquisition, that as the student becomes skilled, he depend less on abstract principles and more on concrete experience. We systematize and illustrate the progressive changes in a performer’s ways of seeing his task environment. We conclude that any skill training procedure must be based on some model of skill acquisition, so that it can address, at each stage of training, the appropriate issues involved in facilitating advancement.’


452 Ibid.


454 Adolfo Peña, loc. cit.


458 Accreditation Council for Graduate Medical Education or ACGME, is a U.S. institution. Official website: http://www.acgme.org
The Dreyfus model has its philosophical origins in phenomenology. Some define it as the product of both philosophical deliberation and phenomenological research.\textsuperscript{459} Indeed, the model offers an analysis of skill acquisition during formal instruction from the first person perspective. The authors do so in acknowledging and exposing the (alleged) limitations of such an inquiry from a third person perspective (scientific) – one that would involve the risk of a superficial treatment.\textsuperscript{460} The model is developed on the assumption of phenomenology’s advantage over scientism.\textsuperscript{461} Moreover, as Selinger and Crease assert, the Dreyfus model makes it evident that issues as essential to science as expertise, can only be fully investigated with the aid of phenomenological tools. The model is also based on the ground that when individuals receive external instruction to obtain a skill, their learning process advances in stages, which can be distinguished and described.

The literature review has indicated that the Dreyfus model was influential in fields such as medical education, so as to proceed to epistemological judgments, to plan curricular arrangements and to shape educational policies. The model is not explicitly prescriptive. However, by providing a theoretical frame of how learning occurs (a theory of learning), it is indirectly suggesting a normative form of didactics. For the purposes of this thesis (as discussed in chapter three), the model will be treated for its descriptive qualities and its potential to contribute to a descriptive didactics of architecture. In the field of architectural education it provides us with a way to frame this world. Such deep understandings of how learning occurs unavoidably influence our thinking and may direct us to consider how and even what we are teaching. The model seems very relevant to informing explanations about the education of architects in design and problem-solving skills, during their course towards expertise and practical wisdom. In conclusion, the thesis suggests that the role of a ‘translated’ Dreyfus model can be essential in the development of architecture’s descriptive didactics, in revealing and understanding functions of the learning phenomenon. Moreover, we aim at exploring the differences between learning architecture in Solitude and in Republic along the distinct levels of the learning process.

\textsuperscript{459} Adolfo Peña, loc. cit.
\textsuperscript{461} This idea is analytically developed in: Hubert Dreyfus, ‘The primacy of phenomenology over logical analysis: A critique of Searle’, Philosophical Topics, 27(2), 1999, pp.3-24.
Dreyfus and Dreyfus developed the model originally based on the distinction of four binary qualities. These were: recollection (situational or non-situational), recognition (decomposed or holistic), decision (analytical or intuitive) and awareness (monitoring or absorbed). The four qualities lead into the development of five roles in the learning process, which we are now going to discuss in terms of the aforementioned five stages. In the following analysis of the various stages I am drawing from the expanded and more recent version of Hubert Dreyfus’s texts included in his book On the Internet.

5.4.1 Stage one: the novice

At the first stage of skill acquisition in the Dreyfus model (from here referred to as ‘the model’) we find the novice. In terms of the four qualities mentioned above, the role consists of: non-situational recollection, decomposed recognition, analytical decision, monitoring awareness. More analytically, teaching novices begins when the educator decomposes the work environment into features, which at this stage are context-free: the novice is able to acknowledge them although may not possess the targeted skill. The context-free features are then followed by rules, through which the novices can determine their actions in respect of these features. At this stage students are merely consumers of information (either of facts or of processes) that the teacher is providing, so that they start to comprehend the particular domain. They just begin to discern the features and to practice the processes. But both features and processes at this initial stage are disconnected from the broader context, within which they would all become meaningful. Students learn at this stage rather individually.

It appears that for the novice students there is limited possibility of interaction with others, let alone with mature knowers of the domain in the context of a complete, meaningful situation (i.e. for a ‘proper’ design project). The design studio setting seems to be compatible with these characteristics. However, across a whole spectrum of teaching approaches in architectural education, this stage may be not as clearly defined: novice students may from the outset be directed towards involvement with a project, although small and simple. We see in this the idea of a basic context, which Dreyfus excludes from his description of this

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462 The Dreyfus brothers developed the model in the early 1980’s, in the domains of education and operations research, beginning with the influential 18-page report after research at the University of California, Berkeley, Operations Research Center for the United States Air Force Office of Scientific Research.


464 Donald Schön and Nelly Marda provide detailed accounts of such scenes in the design studio.
particular stage. However, the seminal context cannot be one that would connect with the ‘big’ meanings – what we could see as a multiple reiteration between the abstract and the pragmatic concerns of design.\footnote{Again, we can acknowledge simple information, features and methods in descriptions of the design studio by Nelly Marda and Donald Schön.}

Even if architectural education appears to deviate from this puristic classification of the first stage, in the sense that there is from the outset an attempt to provide students with at least some contextualised, basic information, we may have to accept that the gradual mode of accession into domain-specific knowledge is a reality. In such a way we can find the reason why a novice is far from understanding architecture even though they may have been provided with or even ‘assimilated’ the necessary information: what will be missing is the context, within which this information will become meaningful. In any case, simply abiding by the rules in the real world usually manifests in a poor performance. Dreyfus stresses the fact that there is much more for a learner to comprehend than the memorised features and rules that connect these features, for a learner to comprehend. Learners require not only facts, but also the good understanding of the framework, within which this information can make sense.

\subsection*{5.4.2 Stage two: the advanced beginner}

In later accounts of the stages,\footnote{Hubert Dreyfus, \textit{On the internet (Thinking in action} 2\textsuperscript{nd} ed.), London: Routledge, 2009.} Hubert Dreyfus amplified the initial phase by discerning the novice from the advanced beginner, thus increasing the number to six. The ‘advanced beginner’ is now the second in the hierarchy of the more recent version of the list. At this stage, the novice gradually gains some understanding of the frame of reference. As a result, some experience accumulates when one copes gradually with real-world situations. This happens when one is enabled to observe more consciously and when a tutor (or ‘coach’) points out meaningful examples of additional (initially not visible) aspects of the design problem, or of the design process. Once students cope with a sufficient number of examples, then they can acknowledge these additional aspects for themselves. At this stage, rules are giving place to instructional maxims: differentia is the experience gained. Students are now able to recognize the new (situational) aspects, as well as the (non-situational) features to which the instructor’s maxims refer, thanks to a certain degree of experience that is acquired.

Drawing on a few examples from architectural education, it now becomes clear that a list of features that a student could study and learn would not be as valuable as a choice of instructional examples in learning how to proceed to meaningful distinctions within the
situation (of design). Unlike rules, a maxim is useful only when the student has a relative comprehension of the domain to which the maxim refers. What exactly takes place in formal education – at a School of Architecture – is the framing of information provided to students. At school, features and rules that associate them with processes are inserted into a frame of reference, so that the student begins increasingly to understand their meaning. The tutor is functioning as a coach, who facilitates the student to pick out and recognize the meaningful situational aspects – the aspects that structure and render the material that is to be ‘learnt’ comprehensible.

Learning at this stage still takes place within a detached, analytic frame of mind, as the student follows instructions and is provided with examples. For this reason we could justify seeing learning still taking place in a state of ‘in Solitude’. At this point Hubert Dreyfus, intending to pre-empt, stresses the importance of the physical co-presence of tutor and student within the real situation – whether this refers to student practicing or to thinking. Moreover, ‘a special kind of involvement’ is presented as a sine-qua-non condition for the student’s further progress. This is the point at which the student starts to operate within the domain of ‘in Republic’.

5.4.3 Stage three: the competent

At the third stage in the process of skill acquisition a learner is gaining competence. In terms of the four-qualities-model the role is summarized in: situational recollection, decomposed recognition, analytical decision and monitoring awareness. On the way to becoming competent, the student obtains even more experience in the domain of design, and at the same time becomes able to recognize and follow an immense number of potentially important (and meaningful) features of the process. At this point, the student lacks the capacity to distinguish what is really important in the particular situation. Because of this, the effort to perform the task becomes stressful and even overwhelming – the student wonders how it is possible for anybody at all to finally master the skill in question. Hubert Dreyfus claims that for people to cope with such an overload and to finally acquire a skill through instruction or experience, it is necessary to learn how to devise a plan or to adopt a certain perspective. Later on, these tactics will allow the student to determine which of the situational features need to be considered as important and which could be overlooked. The model suggests that at this stage students learn to limit themselves to just a few among a large number of potentially important features or situational aspects. Thus, they are able to comprehend the situation and make relevant decisions.
In order to avoid mistakes, competent students, almost instinctively, are seeking for rules and conceptual methods, so that they can judge successfully which plan to develop or which perspective to adopt. The rules and maxims provided at an earlier stage for beginners are not as easy to find at this stage. What’s more, if they were found, they would prove insufficient for the scale of problems of this stage. This means that the number of situations is large and there are slight, almost indiscernible differences among them. In fact, Dreyfus asserts that there are always a larger number of situations than those we could even possibly name, let alone define precisely and produce rules for. This happens as the projects tend to become more realistic and the design problems more complex and demanding. This makes it impossible for a tutor to prepare a catalogue of the possible situations for the students, coupled with instructions for each one of them individually.

This point sets the limits of the possibility of didactics: is it the proper moment for the tutor’s role to lessen? Students have now reached a point where they are expected to decide for themselves which plan to develop or which perspective to adopt in each individual situation. While students at this stage are typically deciding for themselves, they are often doubtful of their own judgments. They are still uncertain as to whether their choices towards resolving the design problem will turn out to be the appropriate ones. This incertitude, the Dreyfus stresses, is not simply exhausting but frightening. Unlike the previous stages, a student’s errors cannot now be justified on the basis of insufficient rules provided. Success relies upon the student’s choice of adopted perspective and this creates an unprecedented sense of responsibility in respect of one’s choices. Confusion and failure are often the result of their attempts, but when things turn out well the competent student experiences a kind of excitement that is unknown to the beginner.

Because we are embodied, emotional beings, Dreyfus suggests that failure or success really matter to us. Therefore, a student by definition feels fear, pleasure, disappointment or discouragement, depending on the results of the choice made vis-à-vis the task at hand. The difference now is that the competent student gradually becomes emotionally engaged with the task, and it becomes difficult either to withdraw from this effort or to take a detached stance – one that a beginner would have adopted by just having to follow the (tutor’s) maxims. Here Dreyfus rhetorically questions the actual value of all this emotional pressure within the learning process, particularly in the context of our cultural conditioning as Westerners to dominate our emotions with the intention of becoming more and more

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468 Hubert Dreyfus determines along the course of thinking from the times of Stoics through Descartes.
unbiased and objective. He goes on to advance the argument by pointing out that all rational motivations, objective detachment and honest evaluations are (conventionally) taken to be the best way of acquiring experience.

We might consider any emotional involvement with a task (i.e. resolving a difficult design problem) as impeding the unbiased application of rules and of rational decision-making, hence impeding the further development and refinement of skills. But Dreyfus at this point claims quite the opposite: drawing from empirical research, it is assumed that resistance to emotional involvement and to the sense of risk-taking ultimately leads learners to stagnation, to boredom and to regression. One might presume that the contribution of emotions to the maturation of a learner makes this a rather esoteric, inner and lonely process – creating the conditions where learning takes place more in Solitude. The student feels (and perhaps in isolation) a sense of risk in taking this or that decision which will determine the design outcome. Equally inner-aiming seems to involve the sense of the danger of exposure to the eyes of others with ‘an erratic’ design solution.

To some degree, these feelings could be associated with an advanced sense of responsibility (the design outcome has to be functional and error-free for the sake of users, clients, etc.) when dealing with real-world situations. On the other hand, for students of this stage, working on school projects such as the Design Studio projects, in which reality restrictions can be discounted for instructional purposes, the sense of risk and danger may be more associated with the condition of being a student: in the course of their educational journey, the student has learnt to understand, to assimilate and at times to predict the norms of others (especially of those with authority). Consequently, students perceive, predict and, in a way, internalize the evaluations of the others (of their peers and mentors), hence they experience emotions generated by these (real-experienced or imagined-projected) evaluations. This synergistic process, between perceptions and emotions, probably reflects one aspect of the inner, lonely, creative learning process – one aspect of learning in Solitude, to which we could attribute idiosyncratic inclinations, inherent talent and giftedness.

Throughout the process of learning design in the architectural studio, there are instances where much is at stake, and the student is called upon to propose and defend an idea, which may fail or fly. For the student, this condition constitutes an engagement with the learning situation. The approving or disapproving response of the tutor, asserts Dreyfus, bears a certain emotional weight for the student. It is actually the risk of exposure to the

469 Idem, p.33.
judgement of the others that may turn out to be intimidating. But even in these terms, could this part of learning be considered as private and withdrawn from the environmental influence of fellow students, the tutor, or even, ultimately, of the school? It may be fair to assume that the perceived risk tends to be intensified when the student works individually, and hence, he, or she, experiences exposure to the tutor’s rightness more intensely. At this point arises the question of the tutor’s role in the formation of the student’s emotional response to the learning experience. Students tend to imitate their tutor as role model. The influence of the tutor can be critical in instilling within the student the example of engagement and commitment to the learning situation, or of withdrawal from it.

However, it is fair to assume that the Dreyfus model may have limits in its interpretative capacity. Empirical research by Helena Webster,\textsuperscript{471} undertaken in architectural schools within the UK, indicated this in the example of the design jury – one of architecture’s established didactic tools. In this case, the students’ emotional engagement with the situation – their fear of failure and of risk over being exposed to the others – negatively transformed their lived experience into a non-educative one. Research evidence suggested that students, in response to such environmental pressure (emotive characteristics associated with evaluative processes), did not benefit from deep learning by internalizing experiences towards restructuring their architectural habitus. Instead, they were found to develop strategies of survival by resorting to surface learning (i.e. implying that they were following instructions), implying minimal engagement with the situation – all contradicting the model’s expectations. This outcome suggests that possibly additional variables – other than those already taken into consideration by the model – interfere and need attention, for instance cultural, ethical and power relations. What becomes obvious, though, is that tutors (and jurors) operate unrelatedly to their students’ zone of proximal development, and evidently, out of its range.\textsuperscript{472}

This example, by disclosing possible limitations in the Dreyfus model, supported the need for a second component for the proposed (hybrid) model of descriptive didactics. In the live project setting, on the other hand, the risk of involvement is shared with the other students, and hence is experienced less intensely. Additionally, the risk is felt more in the interaction with extra-educational agents such as the client, the community etc. In such an educational setting the instructor is perceived more as a facilitator and even a collaborator


\textsuperscript{472} This is analysed as part of the pragmatist component of the proposed descriptive model for architecture’s didactics in section 5.6.1, p.207 and p.211.
than as an agent of authority with the role of assessment. A part of the risk-experience derived from increased responsibility towards the ‘real-world’ partners of the live project (and its clients) is, again, weakened due to sharing with the group of fellow students. Another possibility is that, because students are still in the educational process, they may feel more accountable to the school than to external agents, like the ones involved in a live project. This may be justified by a sense of belonging more to the intra-educational territory than to the external world.

We may tend to believe that the student’s sense of risk, and the consequent emotional investment, refers more to the outcome of learning (i.e. the result of a design exercise) while the student is still at the stage of a beginner. In contrast, while at the stage of competence, the sense of risk derives from the process: it refers to the student’s process of choosing how to act: i.e. in design choices, in conceiving ideas and in defending their conception. This appears to be a critical difference between the two stages of learning. Indeed, the beginner is expected to follow the provided rules or maxims and to accumulate experience. Whether the beginner remains detached from the problem or not, Brenner’s conclusion is that it is merely a question of incentives. In this sense, it is the tutor’s example and the tutor’s handling of the situation that makes for the incentives.

In conclusion, the beginner is not emotionally involved in choosing the adequate actions to proceed with the design problem, yet may become emotionally involved by the outcome of these actions. Only at the stage of competence is the student emotionally invested in making choices about action-taking. Dreyfus points out that the condition of emotional involvement to learning is essential in advancing from what we roughly see as the left-hemisphere analytical approach to a right-hemisphere holistic one. He further elaborates on the different kinds of emotional investment, concluding that not all emotional reactions are effective. More precisely, simply feeling enthusiasm about success, or embarrassment over failure, or fear of feeling ashamed by one’s mistake, is not educationally functional. Instead, what is actually meaningful is taking responsibility for one’s successful or unsuccessful choices, and even studying them.

Practically this could mean replaying one’s performance in one’s mind, step by step. This should not be the interrogation of one’s self or the attempt to analyse what went wrong or right and why, which would actually indicate detachment. Instead, for the process to prove fruitful, one would accept the deeply felt consequences of one’s actions. What Dreyfus is suggesting here could be seen as analogous to (but different from) meta-cognition: one’s

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473 Patricia Benner, loc. cit.
474 Hubert Dreyfus, op. cit., p.150.
conscious revisiting of the knowing experience, which is considered a condition for higher-order learning. The meta-cognitive stance presupposes detachment (asking one’s self what went well or poorly), and indeed, a learner advancing towards expertise is anticipated to act coldly and rationally rather than emotionally. However, the Dreyfus model assumes that someone advances to expertise provided that instead of analysing right or wrong moves, they simply internalize them – this student, in Dreyfus’ words, ‘lets them sink in’. 475

I would like to elaborate more on this difference. By meta-cognition the learner looks back at every step of the knowing process by means of rationality, always involving some objectified frame of reference. In contrast, by relying purely on emotion, the incentive for learning has evaluative foundations: emotions are generated by evaluations of the tutor, perceived by the student as manifestations of approval or disapproval, which the student comes to predict. I suspect that because emotions are more personal than rationality (which is shared), and because they are associated with assimilating a frame of values, we understand that they constitute a more effective, intense and secure way of learning. Of course, while the terms ‘assimilation’ and ‘internalization’ here have no absolute meaning, the good student assimilates the tutor’s system of values, and it is exactly this that will enable them to acquire the kind of flexibility necessary, not only for further skill refinement, but also to re-energize the field by subverting the old.

5.4.5 Stage four: Proficiency

As we have already seen, the situation of students at the stage of novice and advanced beginner is characterised by detachment (non-involvement), mere consumption of information and engagement with the rules. According to the developmental view of the Dreyfus model, students are able to advance to the next stages because positive and negative emotional experiences are gained through involvement in the learning process. The model views these emotional experiences as the catalysts that will either boost successful responses or will inhibit the unsuccessful ones. The student gradually progresses from dealing successfully with rules and principles to becoming capable of making distinctions among the situations (most of the time presented as design choices within the projects) and producing relevant responses.

The model emphasises that assimilating experience in a somatic (embodied), a-theoretical way is the condition for achieving proficiency. The passage to the stage of proficiency is marked by the substitution of a student’s logical (reasoned) responses by

475 Ibid.
intuitive ones. The students are coming to a state of a (quasi-)natural, ‘holistic’ comprehension of the situation and they can perceive instinctively the different aspects of it. The objective for the students is to obtain such a degree of experience that they will be able to discern the important aspects from the wide spectrum of aspects involved in the situation at hand, and to respond accordingly to each one of them. The proficient students are now able to perceive naturally the essence of the problem at hand and distinguish the important aspects of the situation, but they still have to take decisions on how to react, and on exactly what to do. At this stage, the students can only resort to the detached rules and maxims in order to decide. Decision making is not yet spontaneous and is both laboured and time consuming.

In conclusion, the proficient student can see the problem that needs to be resolved but has still to discover the best possible solution.

5.4.6 Stage five: Expertise

The more experienced, expert student is capable of not only seeing what is needed to do, but also of deciding how to achieve it. Additionally, the expert possesses a large repertoire of situational discriminations so that they can immediately react to achieve this goal. What distinguishes the competent from the expert learner is that the latter is prepared to undertake subtler and more refined discriminations. In many situations, which all appear similar to each other, the expert has learnt to discriminate those that require one kind of response from those that require another. In other words, having gained experience in a variety of situations, all which require different tactics, the expert’s mind is immediately and intuitively discerning of subcases and decides upon the most appropriate response to undertake. Readiness of reaction is characteristic of this stage, so that learners rely almost exclusively on intuition rather than on rational thinking.

The student is expected to gain experience and learn by encountering and/or perceiving small, random variations in situations, seeking appropriate responses at the appropriate time. What if the student was not coming across the necessary number of variations randomly, but the tutor at School provided educationally purposeful ones? As the model demonstrates, the student can benefit from observation and imitation of someone already experienced. This is justified because the number of necessary – otherwise random – variations to be tried by the student can be reduced to fewer and more focused ones. This pattern is suggesting the precise role of the tutor at this stage of learning. By being the model practising architect, the instructor on one hand provides the student with the example of a skilled practitioner, who is doing the appropriate thing and in a timely fashion. On the other
hand, for the student, the example of the instructor becomes a first-hand experience of how the learnt theory is transformed into practice.

Architectural Schools always intend to do exactly this in to varying degrees: they reconstitute real-life situations in the design studio, where students are called to perform as if they were working in an environment corresponding to a later stage of their career. The briefs, the instructor’s comments and contextual analyses, the students’ first-hand experience of in-situ situation obtained in field trips among other methods, all constitute a reconstruction of the real-world situation, in which the students are called to operate with the objective of learning the most they possibly can. To indicate the precise mechanism of learning, Dreyfus elaborates on the required conditions: the student must not be provided with objective descriptions of the situations, as this would provide a mode of detachment. Conversely, the students need to identify with the designer’s role, and must be left with a sense of the role’s difficulties along with its consequent satisfaction or disappointment.

Put differently, in the transition from competence to expertise, the (educational) situations have to have a certain weight in the student’s perception, just as the flight simulators are successfully instructive only if the trainee pilots can feel the stress and the danger of the situation they represent. That is, the students need to become emotionally (bodily), and not mentally, involved in the situation. What students learn by imitating the expert, as the teacher, under such conditions and by interacting with her or them, are things that are not subject to precise rules. For example, one’s style of approaching the design problem, the degree to which one needs to persist when a conclusive solution of the design problem is not visible or, the degree to which one can resort to external references that will influence the proposed design solution, etc. The best way, the Dreyfus model suggests, to enable the students to become involved is to have them work in the field – which is a form of apprenticeship. In an apprenticeship-like setting, students are immersed into the skilled practices of the field, so that they are emotionally involved in the way described previously and, additionally, they interact with the experienced tutor, whose non-verbal characteristics they tend to assimilate and imitate.

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476 Hubert Dreyfus, op. cit., p.34.
477 Hubert Dreyfus uses at this point the example of Wittgenstein. As professor he inspired successive generations of students, who kept imitating not only his own style of posing questions, but even his gestures of nervousness or desperation. In the architectural schools it is often noticed an instructor with a strong personality, whose design style is assimilated by students along with an expressive style and the body language. In the educational milieu of architecture this is often commented as the phenomenon of producing ‘cloned students’.
5.4.7 Stage six: Mastery

This point is challenged by a critical question on whether the good student should fully imitate the experienced tutor on the way to expertise, thus becoming their clone. Hubert Dreyfus poses this reasonable question to introduce the need for further theoretical advancement in what has been added as a sixth stage, namely mastery, which lies beyond expertise. Indeed, from an expert in a field one would expect a certain degree of independence, reflected in their capacity to think and act autonomously, innovatively and ultimately, to obtain an individual style.\textsuperscript{478} The concern is that someone who has learnt simply to imitate the great master may not be able to exceed this master’s skill-level, and contribute to the field with an original breakthrough. We could probably acknowledge this issue in architectural practice, at what could be described as the professional entourage of ‘star’ architects. The same would also be the case with architectural students who may choose to follow the same studio master for a long period in the course of their studies, especially if this happens to be an acknowledged, influential figure of the field. The risk faced by the learner is that they identify unwaveringly with the one mentor, missing the chance to develop an individual style, and resulting in unexplored creativity. This would also suggest, in a way, a lack of dialectic and critical processing in their experience gained thus far. The only way out for a learner in this position would be – once one has acquired experience and has infiltrated the master’s style and culture – to distance oneself from this leading figure and move on to another, having already acquired something of the experience, style and culture of their mentor. The idea is that after successive rounds of ‘apprenticeship’ alongside a number of different masters, each with a different style, the learner would avoid the danger of imitating\textsuperscript{479} just one instructor’s style.\textsuperscript{480} This constitutes the achievement of a higher level of skilfulness that is mastery, through which Dreyfus extended the five-stage model of skill acquisition to the sixth stage.

\textsuperscript{478} In this context the term ‘style’ refers to a holistic notion that characterises the specific skill-possession. It does not mean the aesthetic or architectural style, but rather a gradually developed idiom of thinking and working, one that reflects one’s own stance and worldview. The term here conforms to a particular view of skilfulness as an undividable state, which transcends the sum of any constituent properties.

\textsuperscript{479} In the sense of assimilating and perpetuating the style.

\textsuperscript{480} Hubert Dreyfus emphasises this point by the use of the example from music education: the apprenticeship of the music student next to numerous different masters of music would destabilize him or her and cause confusion to the extent that he or she abandons any attempt to imitate the style of anyone of the masters. Consequently, the student is forced to develop his or her independent, individual style.
5.4.8 Stage seven: Practical wisdom

We have been able to attend heated discussions about whether the graduates of formal architectural education are sufficiently prepared to perform in the 'real world'. If the design skill acquisition could be exhausted by the sum of all the particular constituents of an architectural curriculum, then there would have been no question. But it seems that the total sum is not enough. Hence, in the latest revision of the model, Dreyfus culminates the analysis of skill acquisition with a seventh stage, the practical wisdom. At this last stage, students acquire the skill in question to the ultimate degree by not only imitating the style of the experienced tutor, but also infiltrating the style of culture. The style of our culture is something so somatic and all-pervasive that it becomes invisible to us. Indeed, it is actually too somatic to be captured in theory, and cannot be expressed or transmitted in words. By propagating tacitly from body to body, it constitutes the necessary substructure for any learning process to take place. It is acquired by contact with other humans, so that one obtains what Aristotle defines as practical wisdom – the general capacity to act appropriately, at the appropriate time in the appropriate fashion. This is the dimension that renders learning at these advanced stages a profoundly social process – learning with the others, from the others.

In conclusion, one cannot achieve the ultimate level of practical wisdom in a certain field – in our case, in architecture – if the learning process will not culminate in Republic. In order to achieve this level of skill in architecture, students need to be present in places where the older, experienced architects reside, and to interact with them in some practical application of theory. This is also necessary, because the students will learn from their older and experienced tutors a sense of their style and additionally, will have the chance to establish a deeper understanding of the culture (or zeitgeist, or 'spirit of the times') around them.

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481 See Oxford Union Debate, chapter 1, sections 1.3, 1.3.1 and particularly section 1.3.1.1
482 Of curricular constituents as they are presented in the form of courses of an architectural programme.
483 Dreyfus essentially draws from the Aristotelian concept. Aristotle discussed practical wisdom (phronesis) in Nicomachean Ethics, Bk,6, as an intellectual virtue of practical (as opposed to theoretical) reasoning. Aristotle argued that practical wisdom cannot be taught. Instead it can only be acquired through experience. In: Hubert Dreyfus, op. cit., p.44.
484 This brings in to the discussion on education the concept of the hidden curriculum, introduced by twentieth century French sociologist of education, Pierre Bourdieu.
485 We are here discussing about the 'style of culture' that students will understand deeply, as something that is transmitted only a-theoretically, non-verbally, but only through the long-lasting interaction with the people of the culture, ultimately, immersed in it. In the context of formal education, however, this understanding is attempted to be rationalised, at least up to a certain degree. This is necessary because in our times, architecture students are educated with the perspective that they will perform practice also abroad, serving foreign to them cultures. This may be happening already during their studies with field trips.
5.5 Discussion of the phenomenological approach

The Dreyfus model is primarily descriptive of the learning and teaching phenomenon. It focuses on expertise and practical wisdom as the highest levels of a well analysed-in-stages process of acquiring a skill by external instruction. At the same time, the model implies normative claims about how learning is best taking place. Critics claim that the model is philosophically important as it shifts focus onto (and urges the learning process towards) expertise, away from its social and technical externalisation and towards universal structures of embodied cognition and affect. It is for these exact reasons that the model is compatible with the choice of this thesis to focus on didactics. The analytical and the descriptive qualities of the model, by unfolding the innate traits of the learning process, determined its employment to this enquiry into architectural education, and, more precisely, its role in the foundation of a descriptive didactics for architectural education. At the centre of the model is an emphasis on its concepts of implicit knowledge and intuition. The fundamental premise that underlies this choice is that experts work from intuition rather than from reason:

the expert, like masters in the ‘long Zen tradition’ or Luke Skywalker when responding to Obi Wan Kenobi’s advice to use the force ‘transcends’ ‘trying’ or ‘efforting’ and ‘just responds’.

Characteristic to the model is the idea that the learner’s preoccupation with the process is considered, in rational terms, a detached stance that inhibits progress to the highest level of education in a certain skill. For the Dreyfus model, an ‘expert’ is someone with acquired experience, who, performing intuitively, devises instantly the appropriate perspectives without thinking analytically, since she or he has reached a level at which they are able to refrain from paying conscious attention to their performance. This is a point of rupture with the established (in educational terms) cognitivist view, which praises meta-cognition for its educational value. The Dreyfus model stresses that revisiting the process of learning per se impedes advancement from proficiency to expertise and to practical wisdom.

If we were to use the Dreyfus model to track learning in students of architecture, we would expect them to reach the higher levels of learning, to achieve expertise and even practical wisdom only when they have become emotionally involved with their learning experience. At the same time, to perform by intuition would imply that students have reached a level at which they abstain from reflexive responses and propositional

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487 ‘Cognition about cognition’, or ‘knowing about knowing’.
justifications regarding their design decisions. The idea was initially expressed in arts education as a concern that, by developing in students too much verbal cognition and reasoning, one would snuff out the creative process. It has also been a theme that has preoccupied architectural education discourse in the past. Scholars have been suggesting that architecture students needed to develop their pre-existing inclinations and creative capacity as a kind of reflex (‘the shooting arm’) in order not to be blocked by the concurrent development of talents other than the visual, such as the verbal.\textsuperscript{488} Interestingly, the virtue of refraining from verbal explanations, reasoning and reflexive activity in the teaching situation, has been extensively treated by Jacques Rancière in the parable of the ‘The Ignorant Schoolmaster’, as a quasi-synonym of love and essential involvement in the adventure of teaching.\textsuperscript{489} The idea is that when students are equipped with contextual sensitivity and experience, they will be acting intuitively without thinking analytically, and become ready to produce – almost unconsciously – the appropriate perspectives to devise the suitable plans for the design-problem at hand. Should this not be the case, they would have to base their performance on the observation of formal rules, thus being unable to advance beyond the first stages of competence.

In conclusion, for the advanced student of architecture at the stage of expertise, intuition is the condition in which (and at the same time the indicator that) all denotative knowledge has been integrated to an internalized, indivisible, assimilated whole, at the student’s disposition. By defining intuition in these terms, the model is suggesting a state in which intuition is the expression of an embodied capacity to apprehend deeply and frame the world, to perform holistically and to create authentically, transcending the mere application of rules or maxims.\textsuperscript{490} This phenomenological, first person approach, adopted by the Dreyfus model, offers a deep insight into situations and opens up potentials for the enquiry of architectural education from an unprecedented perspective. More specifically, the thesis claims that the development of a descriptive didactics for architecture could benefit from the perceptions and justifications of the teaching and learning phenomena in such features of architectural education as the studio project and the live project. Additionally, the model could prove efficient in describing and offering explanations of archetypical conditions of learning (in) architecture, such as the apprenticeship and mentoring. Existing descriptions of

\textsuperscript{488} See also Chapter 1, section 1.3.1.2.
\textsuperscript{490} Whether these could be aesthetic, architectural, functional rules, or commands of architectural fashion and ephemeral norms.
the same, which depart from other theoretical perspectives, could not provide a complete image.

Despite the fact that the Dreyfus model has been widely accepted, as the example of medical education is suggesting, it has also received critique from different corners. As could be expected, its strongest critique originates initially from the field of nursing education or, more recently, from medical education. Firstly, the model has been deemed insufficient in explaining the everyday experiences of learning due to its linearity. It has also been criticised for failing to grasp the sociological dimension of education, overlooking issues of social structure or social knowledge. Generally, by defining expert knowledge as the result of a subject’s training in contextual sensitivity and experience, the model is criticized for ignoring other meaningful factors such as the expert subject’s pre-installed ideologies, prejudices and hidden agendas or other forms of cultural embeddedness (habitus). In the same line of critique, the Dreyfus model is accused for ignoring the possibility of society being endangered by experts, while it is dealing with the opposite (society troubling the experts). Overall, the model has received criticism for overlooking the socio-cultural dimensions of the educational phenomenon.

Positioning the model as the opposite of scientific realism, other critics attribute to the model’s failure to identify expert subjects (nurses for example) on the grounds of the absence of specific objective qualifications for expertise. Some other critical views are assessing the model from the point of view of philosophical consistency. For example, limitations in the phenomenological analysis of the model are attributed to the lack of hermeneutic sensitivity. More specifically, the model is criticized for failing to provide a description of the hermeneutic predicament. Its account of expertise is claimed to adopt a reductionist view with regard to the ‘knowing vs. not-knowing’ opposition: the difference between the two states is seen as a question of difference in knowledge possession rather than an issue of the subjects’ belonging to two different cultures.


494 Based on phenomenology, the model stresses personal experience, in which considerations of objective reality are not taken into account. For Husserl, the world is only a presumptive reality, in contrast with the subject, who is the absolute reality.

All publicised critique of the model has indicated that discussions about ‘expertise’ unfold around either epistemological or political issues. For the scope of this thesis we will continue distinguishing the former, which concerns the domain of didactics, from the latter, which pertains to pedagogy. Although such matters are equally essential to understanding architectural education, and substantial research has been undertaken by architectural scholars, it has been, from the outset, an informed choice that this thesis contributes to the development of architecture’s specific didactics as the first step. Its clear focus is on architecture’s didactics. I believe that the pedagogical (political, philosophical) deliberations will find their exact position once the first canvas of didactics has been woven, so that connections with the practice of teaching and learning in architecture can be established. In this respect, the Dreyfus model is proposed in this thesis as an essential constituent to the extent that it can offer understandings at the level of architecture’s didactics.

The thesis understands the role of implicit knowledge and the concept of intuition in the model as a response to the utilitarian turn of higher architectural education. Intuition insinuates the indefinable space, where even the uncountable or ‘superfluous’ properties of education can be accommodated. Intuition, then, constitutes not an educational end in itself, but a process of becoming for architectural education per se. Employing the Dreyfus model for understanding architectural education will ultimately have the value of encouraging educators to consider those additional qualities that exceed the measurable sum.

To advance the argument against the instrumental role of architectural education at the university level, the ‘translated’ Dreyfus model prioritizes involvement vs. detachment and provides the possibility for challenging the established model of scientific realism.

From a different standpoint, the concept of intuition, as a key-concept of the Dreyfus model, is suggestive of the need to overcome – at least occasionally – the rational, analytical reasoning in terms of countable things, which is always connecting human agency with some form of a certain telos. Up to this point, architectural schools have been designing their curricula as entireties of structurally connected yet distinct, and sometimes quasi-independent, cognitive domains: their epistemological constituents are the number of courses and other educational activities. Based on this perception, the curriculum was expected to have a predictable result: making architects of students. Within this framework, the meaning of ‘architect’ is predetermined by understandings of that particular moment in time. On the one hand, this approach does not leave much space for the unknown, for the potential, for

496 The meaning of the term here may seem vague. I intend to mean also the ‘unquantifiable’ – what transcends the measurable and the expected (i.e. outcome).

497 In the (already discussed) sense of Bildung, or Παιδεία.
what is to-be-known or revealed. On the other hand, by consistently associating educational actions with a preconceived end, education finds it difficult to overcome its horizons of utilitarianism. Consequently, the role of education is readily understood as being instrumental. All discussions around educational objectives are reduced to predictable expectations. Education – and architectural education, more specifically – is no longer about the journey, but becomes limited to the destination. The question of the instrumental character of architectural higher education has been well addressed in the Oxford Union Debate.\footnote{498}

Other critiques revolve around the meaning of ‘expertise’ and the implied role of the expert that the model promotes. According to these critical readings of the model, the latter suggests that ‘I [first person, subject], like experts, cannot propositionally justify my decisions with reference to given rules and I just trust that my decision is good’.\footnote{499} Otherwise, the expert subject allegedly feels no need to seek external ratification for his or her own abilities. For Selinger and Crease this position evokes the caricature of Heidegger, according to which \textit{Dasein} is accorded too much of heroic freedom.\footnote{500} Selinger and Crease continue to test the Dreyfus model against Heidegger’s perception of sensitivity to the hermeneutic dimensions. They claim that Heidegger would have suggested expertise not as a destination, in which an individual surpasses one’s embeddedness in the world, but rather as a process of becoming. They elaborate on this idea, providing the example of coaches, commentators, etc., whose expertise overlaps with that of the experts and who disclose aspects of expert performance, which escape the grasp even of the performers themselves.

Similarly, we could more generally see tutors and architectural educators, whose teaching articulates design concepts and ideas by means of reason, as being able to reveal aspects of the ‘expert’ design process, which practising experts fail to grasp. This advantage of architectural education, in comparison with architectural practice and apprenticeship, provides an explanation of how architectural education, on such grounds, can often be found at the forefront of architecture.\footnote{501} As such, perhaps when Dreyfus refers to a teacher who acts as a role-model for her students to imitate (in the sense that has already been described in the seven-stage analysis of the process), he means a teacher who has herself internalised the capacity of comprehending and theorising the (design) situation but acts also with intuition.

\begin{footnotes}
\item[498] See also in chapter 1, the discussion in sections 1.3, 1.3.1.1, 1.4.2. Also, see Appendix 1, Jeremy Till - Conclusion [27:17/34:41].
\item[499] Evan M. Selinger and Robert P. Crease, op. cit., p.270.
\item[500] Idem.
\item[501] See also chapter 4, sections 4.4.2.3. Donald Schön has pointed out the advantageous position of the teaching architect in comparison with the practising architect with regards to the particular competence of theorising.
\end{footnotes}
practice, is actually using the acquired theory in the course of practice, in order for students to learn.

In general, the proposed Dreyfus model sheds light on the implicit modes of knowledge made manifest by intuition and acquired through such functions as imitation, example and involvement. These modes may be appearing as the forces of creativity that pertain to the individual domain of the student – implicit modes of learning refer to the type of learning ‘in Solitude’. On the other hand, is student learning not reliant upon interaction with the external environment and the others – even tacitly? Aren’t then the imitation of the teacher and the assimilation of the spirit of culture, such examples of external influence, provided by the model? Is it justified to realize that, in the process of acquiring a skill (according to the Dreyfus model of explanation), learning is taking place both ‘in Republic’ as well as ‘in Solitude’?

In order to discuss this question further, I will draw on the treatise of Mikhail Bakhtin and his account of the concept of ‘utterance’ in terms of interpreting architectural thinking. In architecture, utterances can be interpreted as expressions of design ideas or articulation of spatial concepts. In accordance with this, in design language the ‘basic idea’, or the ‘meaning’ of a spatial or other concept, may be taken as the equivalent of the ‘word’ in speech genres.

Bakhtin suggests that utterance is filled with dialogic insinuations, which must always be taken into consideration when we aim at fully understanding it. Likewise, in architectural thinking, as Bakhtin might have said, a learner’s thought is itself (similarly to a designer’s thought) born and shaped in the process of interaction and struggle with the thought of others. This is unavoidably reflected in the forms that express our thought, and our ideas, claims Bakhtin. In our case, such forms of thought pertain to the category of design.

In terms of architecture, an utterance – the formation and articulation of the design ideas into design attempts by students – is related to preceding links in the chain of communication with the others, whether the tutor or the co-learners or sometimes the extra-educational environment (in interaction with institutions in the process of a project, interaction with live-project clients, acknowledgment of publications, etc.). We can see this part as learning in Republic. Likewise, Bakhtin claims that the utterance is also related to subsequent links in the communication chain: in the form of anticipating possible responsive reactions – for whose sake it is actually born – the utterance is from the outset constructed

accordingly. We have to acknowledge here the role of the others, for whom the design-utterance is constructed, as important. Especially in architecture, it is the others who set the questions to be answered in design – even in cases where the designer appears to set the questions, to be inventing the ‘problem’, it is actually the questions of the others (and for the others) that she or he is coming to utter. Should Bakhtin have discussed the case of the architect and the student of architecture (in the place of his speaker), he would have stressed the preoccupation of the subject with the others’ expected response, and their active, responsive understanding to his/her design. In other words, the design utterance is structured and formed, as it would appear, in anticipation of the others’ response.\textsuperscript{503}

Insomuch as we can see the influence of the external environment, justifying an ‘in Republic’ learning process for the student, there is an area we have still to acknowledge, and which also suggests an internal process – the part of learning ‘in Solitude’. The very processes of predicting, pre-assessing and hierarchizing the others’ responsive understanding (all which is determined by imagination and sensitivity) of one’s uttered design proposals cannot determine anything else but this quality of internal processing.

Another indicator of this condition, in which the design learner negotiates within and finally assimilates stimuli from the environment, is the property of ‘addressivity’ of the utterance: the quality of formatting the communication of design ideas, having already conceived of an addressee. Considering that, from its very inception, the design idea is directed at a particular individual (whether the tutor, or generally the particular milieu of architects) we can say that this is what defines this communication as a genre. The utterance, in this sense, can incorporate both the implicit knowledge (expressed by intuition), and a more propositional, reflective knowledge. Returning to Dreyfus, on the other hand, empirical and propositional knowledge is not included in the scope of the model. The same can be applied to reflective, self-assessed, and self-regulated knowledge.

However, learning to become an architect implies not only becoming creative, but also becoming a professional – one who is capable to communicate ideas in a highly demanding interdisciplinary environment, addressing themselves to colleagues as well as to clients and institutions. This second dimension requires, in most cases, that the architect articulates themselves by means of reason in order to communicate efficiently within the condition of ‘in Republic’. This is the other view regarding the set of skills necessary for professional architects. The necessity for architects, who perform in the professional field, to make their work articulate becomes even more evident through another critique of the

\textsuperscript{503} Idem, p.94.
This refers to the problematic meaning of ‘expertise’ (and the deriving concept of ‘authority’), which emerges in cases where expertise is involved in real-life controversies:

each real life controversy involving expertise takes the form of jockeying between those who advance claims of expertise to advance their authority and those seeking the right authority to whom to defer.

This is the hermeneutic predicament. The critics claim that there is no escape from particular involvements in a given situation, i.e. the sources of authority being disrupted. I would add one more example to corroborate the assertion for the need of an alternative to scientific realism with regard to learning and teaching in architecture. In doing so, I will draw on the well-aimed analysis of the design studio in Mark Dorrian’s article on the ascendency of the evaluative term ‘interesting’ within the discourse of architectural education. Dorrian describes a situation in which a student’s design project is found to aim at a slightly different place than the brief was suggesting and yet seems to fall under the category of a ‘really interesting’ project. Dorrian elaborates that the success of the project may rely not on the response it failed to provide, with regards to the original brief, but in its capacity to raise other, significant questions, some of which may even be challenging the very criteria that it failed to meet. He outlines this occasion, as one in which the student becomes co-producer of the brief. In a different instance, the tutor is allegedly positioned as a co-producer of the student’s work. The examples of Dorrian suggest that there is always something unexpected in the educational situation, something that may take all parties beyond what had been planned beforehand: a paradoxical reversing of roles, an osmotic relation between the parties involved, and an instance of one self reflected in another etc. This is a possibility that would be wise to consider.

Within the same article – in an account of how a student’s design project is built – Dorrian explains the aspect of indeterminacy as one of the characteristics of the educational phenomenon:

But at the same time we are aware that this is not a straightforward case of accumulation and instead understand that things are abandoned, or are not taken up, or go unrecognized in the process – which is to say that at each stage in the design process, in each representation made, there exist complex potentialities that point in different directions and suggest

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506 Ibid., p.179.
alternative futures for the project than the one that will eventually be arrived at\textsuperscript{507}

If everything in the educational praxis was determined only by reason – hence, explained by scientific realism – there would neither be space left for possibilities like the ones described above nor understandings of the implicit. And, if creativity and imagination are to find their encouragement within the area of the unforeseeable and the immeasurable, if passion – the affective side – is motivating creativity and imagination, then reason might need to assume the role of planning for this trajectory, of implementing its instrumental steps. For all the above reasons, the thesis claims, a descriptive model of architectural didactics could not be advantageous if it didn’t combine both. A hybrid model that describes learning and teaching in architecture needs to develop, and one in which the phenomena would be expressed not only in intuitively derived actions, but also in analytical and reflective processes. To fulfil the latter objective, the next part of this thesis proposes the hybrid model of architecture’s descriptive didactics should draw from John Dewey’s pragmatist view of the concept of experience.

5.6 The pragmatist approach: ‘experience’ in John Dewey’s theorisation

As already discussed, a descriptive didactics for architecture needs to be complemented by and seen against an alternative to the phenomenological view that was previously developed. In the previous part of the chapter\textsuperscript{508} we also reviewed the case of the design jury, the particular phenomena of which, as revealed by Webster’s research, were found to contradict the understandings offered by the phenomenological view of skill acquisition. This example has made the above-mentioned need evident. To this end this part of the chapter aims to shed light on the concept of experience (the conditions of its creation, perception, life-in, organization and educational exploitation) as presented through the pragmatist perspective of John Dewey’s progressive education. Once specified at the level of architecture’s established didactic tools (Design Studio project and Live project) the concept of experience implies notions of the real, reality, and the real-world, etc. that inhabit contemporary architectural education discourse.

Contemporary educational theory defines the traditional (or conservative) one as the approach of education where learning is perceived as the transfer of a prescribed body of knowledge from teacher to student, otherwise referred to as the transmission-model of

\textsuperscript{507} Ibid., p. 180.
\textsuperscript{508} Note previous section 5.4.3.
education – demonstrated in the metaphor of ‘filling empty vessels’.\textsuperscript{509} As the knowing subjects, instructors transfer pre-existing knowledge in dissociation to the living, real experiences of students. In architectural education at the beginning of the twentieth century, for instance, the didactic approaches of Composition and Typology\textsuperscript{510} constituted a standard teaching approach. To work under the ‘universal’ laws of composition that could be applied in every design project, or to imitate types that resulted from precedent analysis, was an example of orientation towards a knowledge that was well established in the past, with fixed criteria of taste, and dissociated from the present experience of the students’ learning processes. Overall, the modernist educational institution was marked by certain established features in its learning and teaching approaches. Among them was the privileging of teacher-directed approaches with top-down methods of knowledge transmission. This was not irrelevant to the privileging of universal, standardized learning outcomes that prescribed the same for all students, irrespective of specific idiosyncratic features or contexts (social class, culture, race, gender, etc.). Overall, education was subscribing to the positivist model.

For contemporary philosophy of education, since the first three decades of the twentieth century when John Dewey introduced his Theory of Experience in Education to frame the tendencies of progressive education, the idea that the student’s personal experience is structurally connected to learning has been continuously in the foreground. The movement of progressive education is associated with the emergence of pragmatism in the philosophy of the second half of the nineteenth century, which came as an alternative to the unresolved dispute between rationalism and empiricism in the quest for the main sources of knowledge.\textsuperscript{511} The progress in natural sciences, that came to challenge the until then established Newtonian world-view and the continuing processes of industrial revolution, were both determining conditions that allowed pragmatism to emerge in the U.S. and to contribute its own response to these philosophical questions. The critical stance towards traditional philosophy – commonplace for proponents of pragmatism – was complemented by a shift of focus on human action. Pragmatism stressed the association of the individual’s mind with the biological, psychological and social conditions experienced by the individual. This was a breakthrough with regards to rationalism and its belief in an autonomous mind that is independent of external influences. It marked the challenging of rationalism’s absolute certainties by the rise of probabilistic reflection. As a consequence, an intersubjective social

\textsuperscript{509} For a more extended reference to these terms see also chapter 4, sections 4.4 and 4.4.1.
\textsuperscript{510} Nelly Marda, op. cit., p.46.
\textsuperscript{511} The problem of whether knowledge is built in the domain of the human mind as it is manifest by reason, or has its sources in the human senses. Pragmatism was born in the U.S.A. during the second half of nineteenth century. More on pragmatism and Dewey is available from: http://dewey.pragmatism.org/
theorizing of truth had come to undermine the individualistic character of rationalism – what was based on an *a priori* reflection, or else, on the certainty of ‘I think, therefore I am’ beyond social references, and even on an overall distrust of the senses. From this point, the search for truth is the duty of the scientific community as an entirety.

As an approach, progressive education developed originally in the U.S. and later in England, with the framework of, and as a response to, significant socio-economical transformations that were taking place at the turn of the twentieth century, such as the expansion of urban areas, the development of industrialization, the decline of the small-scale agricultural exploitation and an increase in immigration influxes, to mention a few. It constituted, at the same time, a reaction to existing, traditional educational structures and a contribution to the emergence of new ideological positions and reformatory educational practices that aimed at addressing the educational needs of an increasing population of students from the lower strata of society. Historically, John Dewey became the leading figure of the progressive education movement, since it developed as an educational tendency within a broader socio-political movement. Unlike previous thinkers in progressive education, he provided his main influence on educational theory in a concise manner and in works that ranged from epistemological presuppositions to a theory about social participation and the role of the school in a democratic society.

Against this backdrop, as Dewey was distilling the idea of progressive education into a concise theory, he was also focusing particularly on the concept of *experience*. The idea commonly held was that good education had the double purpose for both the society and the individual student. The *Theory of Experience in Education* was developed to explore the learning experience of students, to promote understanding of how teachers could successfully organize and to facilitate this experience in order to achieve the educational goals that progressive education was setting. Since then, education is seen as the logically guided development of the capacities and possibilities that inhabit the learner’s experience. Within this framework, didactics primarily affords the effective structure for stimulating and guiding this development. From its outset, progressive education influenced various reforming projects in primary and secondary education in the U.S., in Europe and other parts of the world.

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512 *Cogito ergo sum* is a Latin philosophical proposition by René Descartes. The phrase originally appeared in French as ‘je pense, donc je suis’ in his Discourse on the Method, so as to reach a wider audience than Latin would have allowed. Available from: https://en.wikipedia.org/wiki/Cogito_ergo_sum [Retrieved 11.07.2016].

Tertiary (higher) education in general remained unaffected at the educational level, since its undisputed purpose was the delivery of epistemic content, which was continuously widening and deepening. Its goals (pedagogies) and methods (didactics) didn’t see significant reforms until at least the 1960s. This decade, despite the certainties of the western world about stability and prosperity, is characterized by significant social movements that came to challenge the dominant models and basic assumptions of consumer society in the U.S. and in Western Europe. The new paradigms that had come to renew scientific approaches were challenging both western and Marxist models in Europe. In education, the period between the 1960s and 1970s was marked by a shifting away from the positivist model. Especially in the period post-1968, as Hugo Radice writes, after the unrest at British universities and the heyday of the students’ movement, a continuous expansion of higher education took place, which challenged the traditional elitist concept of higher education.514

As academic governance sought more democratic practices than before, and as curricula broadened in many subject areas, innovating teaching approaches were increasingly adopted. The time had come for many of the ideas of progressive education to find their way into higher education. From another point of view, post-modernism was beginning to affect education with its tendencies to challenge the convention, to tolerate ambiguity and to emphasize the constructedness of reality.

In its turn, the architectural education of the past forty years did not escape the influence of changes and reforms in tertiary education. The infiltration of the idea, particular to progressive education, that living experience is at the core of genuine education, can be seen as an example of such influence. For its students, knowledge comes about through their experience and – in accordance with more recent tendencies in the theory and philosophy of education – in connection to their own (pre)existing experience. This condition has been reflected both in the forms of teaching (in Design Studio projects and Live projects as well as in field trips and the grand design projects abroad) and in the broadening of themes of all kinds of design projects (mainly by expanding the epistemological repertoire both in scale and diversity)515. In the next part of this chapter I will demonstrate that architectural education is also permeated by principles of educational constructivism. For these reasons, I am proposing that a descriptive didactics of architecture cannot be rigorous to the detriment


515 In a most recent account, Mark Dorrian refers to renewed concerns about design relevance in the framework of the constant search for expanding architecture’s agency and relevance with the world. Mark Dorrian, What’s Interesting? On the Ascendency of an Evaluative Term, Architecture and Culture, 4:2, 2016, p.181.
of or in the absence of a concept such as the *experience*, a consideration of which is necessary to its development.

### 5.6.1 The notion of *experience* in architectural education

Drawing on Dewey’s *Theory of Experience in Education*, I intend to revisit the homonymous core concept (*experience*) in an effort to demonstrate its usefulness in providing explanations of learning and of teaching practices in architecture.

The *Theory of Experience in Education* tends to register learning as naturally and endlessly expanding the individuals’ perceptual horizons. Learning means increasing one’s world of experience rather than the mere transference of knowledge. Starting from this innovative perspective, the question of what exactly distinguishes the experience with educational value from the experience with no educational value becomes central in the discussion of what education is. Without this key idea, all practical attempts to develop schools, based on the experience of life, are condemned to vagueness and indefiniteness.\(^{516}\)

For the philosophy of John Dewey, education is a logically directed development of the possibilities that inhabit the experience.\(^{517}\)

An educational approach that is based on *experience* is bound up with a number of characteristics. Firstly, the student discovers knowledge with enjoyment and establishes a positive relationship, not only to knowledge itself but also to the process of its discovery. Then, the association of knowledge with the lived experience of the individual is directing the student to an internal approach towards the ‘childish’ joy and motives of discovery and towards the roots of talent, which is probably lost along with childhood in the process of schooling. Furthermore, knowledge is not an instrument at the service of a power relation and of imposition (domination) between the tutor and the student. A democratic ethos is established through and about the relationship between the student, the teacher, and knowledge. The student in their turn, as a future professional, will not use the knowledge to dominate, but to enlighten from the position of a specialist participating in common affairs, hence becoming an active citizen in a democratic society.

In the course of the years since the inception of the idea, a common impression appears to have been established across all levels of education, that a progressive approach involving *experience* among its priorities is unreceptive to any form of organizing the teaching process.\(^{518}\) This implies that any didactic approach to architectural design would

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\(^{516}\) John Dewey, op.cit., p.38.

\(^{517}\) Ibid., p.73.

\(^{518}\) Dewey has been seriously critical towards this version of understanding the ‘progressive’ in education.
rely almost exclusively on a kind of tutor improvisation. In such a case, the possibility of selecting and organizing beforehand (what a consensus would lead us to see as) a ‘subject-matter’ or ‘content’ along with articulate didactic goals would not be considered. As a result, the student’s learning experiences in the course of a design project could not be staged – at least not beyond the degree to which the project’s brief is prepared. But, does this all mean that – in pragmatist terms – education and experience are one, indistinguishable thing? There must certainly be experiences that can be characterized as educative, or as having an educational value. According to Dewey, the learning progress can be seen as a continuum of experiences where one thing leads onto another, which in turn will open the way to a new experience, deepening and broadening the student’s horizons.

Dewey specifies that “every experience, regardless of desire or intent, lives on in further experiences”. This view also gives rise to the opposite: an experience may also be non-educative, or become one with a negative educational value, in the sense that it delays or even blocks the growth of further experience. Otherwise, a non-educative experience may engender apathy, a lack of reaction, or of sensitivity to the educational aims and objectives. Indeed, when critical scholars of architectural education, such as Helena Webster, Tony Ward, Garry Stevens and Greig Chrysler, amongst others, are challenging its folklore, hidden curriculum and habitus, they are actually referring to different instances of non-educative experiences. Based on the results of a year-long ethnographic study of the Design Jury in a U.K. school of architecture that she carried out, Helena Webster provides an example of the non-educative experience. In the framework of the established

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519 This appears to be a point of contradiction with the Dreyfus’ notion of intuition as the measure of skillfulness, when the skilled subject happens to be the tutor. Looking through the phenomenological lens of the Dreyfus model, the expert tutor is one who performs guided by intuition. This means that the tutor, especially one who has reached the level of practical wisdom, would not need to think rationally before taking a decision on teaching: what to ‘teach’ and how to ‘teach’ it (even how to treat his students) would come by intuition, naturally, spontaneously and instantly. Doesn’t this mean that a tutor like this would not need to invest in time and in reasoning efforts just to perform teaching for his studio students? Isn’t this idea of teaching synonym to the kind improvisation that Dewey denounced? I claim that this is not really a contradiction. The act of ‘teaching’ (the tutor’s performance) is not limited to the very moment of interaction with the students. The required readiness or preparedness of the tutor for that moment and during that moment suggests that the ‘teaching’ cannot be exclusively the result of improvisation. But if as ‘teaching’ we see also the tutor’s preparations for the class, the predicting, deciding, planning, rehearsing, assessing, etc., all what can acceptably be the result of intuition and practical wisdom, then Dewey would most probably have no problem with it. We would thus have a tutor who, expertly prepared (himself and all of the objective conditions) for the studio, could expertly ‘devise’ the actual teaching.

520 John Dewey, op. cit., p.27.


522 In the terms that this thesis established earlier in chapter 3, the design jury is a didactic tool: a site where students learn disciplinary skills, beliefs and values. In the recent years critique, derived mainly from critical pedagogy, has been challenged as of its methods, culture and roles.

ritual of this didactic tool, students were found to resort to ‘surface strategies that were likely to result in ‘a good judgment’ rather than leading to deep transformative learning’, hence making a choice that prioritized ‘survival’ over learning. Provided that the educational priority in an architectural school is learning architecture rather than learning how to ‘survive’ coercive social environments, and for the additional reason that learning how to ‘survive’ directly impedes substantial learning, then this kind of experience is an example of non-educative experience.

Everything in education seems to depend upon the quality of the experiences involved. The *Theory of Experience in Education* holds that the quality of experience has two aspects: the obvious and the non-obvious. The obvious part is the agreeableness or disagreeableness of a given experience – whether the experience is perceived by learners positively or negatively. The selected experiences have to be attractive for the students to encourage their learning efforts and prevent their rejection of the learning process. The non-obvious part of the experience consists of its influence on the following experiences. This part poses a problem for the educator to solve: to provide students with experiences of such a kind that, while not disagreeable, will offer more than temporary satisfaction – and that will create the foundations for future experiences. The selection, by the tutor, of those experiences that will survive successfully in the continuum of the following experiences becomes a central issue in the didactics of progressive education. It is associated with the distinction between experiences of educational value from experiences without educational value. The measure of educational significance with regard to an experience is given by the actual unity between continuity and interaction.\(^{524}\) The tutor, aware of the continuity of experience, is operating in the field of interaction, thus contributing to the objective conditions of learning, through what they are doing and how they are doing it.

In architectural education, the educationally valuable experiences that students are coming across fall into many different categories: i.e. visual, conceptual, intellectual, technical, aesthetic, moral, epistemological, etc. Initially they are a function of the curricular provisions but later on they also depend upon contingencies in the process of teaching. The role of the educator in architecture becomes that of providing students with experiences that will create a foundation for further experiences in their future education. The advanced selection – according to a teaching plan or a ‘course-design’ – of those experiences that will be ‘agreeable’ to the students and at the same time will survive fruitfully among those that

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\(^{524}\) There are two key-principles in the theory of experience: continuity and interaction. The principle of continuity suggests that all experiences affect all future experiences, either positively or negatively. The principle of interaction suggests that each individual’s unique experience of the present is the result of interaction of all past experiences with the present circumstances. John Dewey, op. cit., p.33.
follow, becomes a central issue in the didactics of architecture. In essence, the role of the tutor involves the control of the objective conditions of learning: having the capacity to influence directly the experience of students, the tutor influences their learning. As Dewey famously put it, this includes not only all of what the teacher says in words, but also the tone of voice with which these words are spoken. To influence the objective conditions involves determining a learning environment that will interact with the learner’s inherent capacities to create a worthy experience. Consequently, to select the objective conditions involves the responsibility to acknowledge the particular needs of individual learners in the given moment of time that they are taught.

We can see in this very idea of Dewey’s the precursor of the relevant concept of the ‘Zone of Proximal Development’ (ZPD), introduced much later by social constructivist psychologist Lev Vygotsky. ZPD is defined as the zone of optimal learning. Within it, the level of challenge for learners is neither too difficult, to avoid frustration, nor too easy, to prevent boredom. The role of the tutor in determining this range for each individual student is of vital importance: it is within this range that the tutor will operate to transform simple experiences into ones with educational value.

Conversely, when the educator takes full responsibility for creating the ‘adequate’ environment by neglecting all the other factors, there is also a risk: as the tutor assumes a necessary and sufficient set of conditions in the creation of learning, specific reactions caused to individual learners are in danger of being ignored. The situation appears to be a symptom of the lack of mutual adjustment between the environment and the mission (or purpose) of learning – a characteristic attributed, by Dewey, to conventional (traditional) education. In his case, teaching and learning are of a contingent nature and can be described in terms of a situation where the students who fit into the created conditions are able to learn, while the others simply try their best. Consequently, the tutor (or the didactics background

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525 John Dewey, op.cit., p.45. Also, Hubert Dreyfus makes the same point from the phenomenological perspective, in his account of apprenticeship as a sine-qua-non condition for acquiring mastery and practical wisdom. He comes to describe how important it is for students to acquire even the style of culture – something so physical and diffused that is invisible. Therefore, for a student the tutor’s tone of speaking, gestures, etc., are educative experiences.

526 For decades Lev Vygotsky’s research work on developmental psychology was unknown in the West and actually anticipated much recent work on the social sciences, before it was recognised as pioneer with important implications on education. Russian psychologist, Vygotsky lived between 1896 and 1934. The ZPD is one of the influential concepts of his work of the last decade, with implications on the notion of scaffolding and constructivism. One of the ideas presented in the edited book with his essays; Lev Vygotsky and Michael Cole, Mind in society: The development of higher psychological processes, Cambridge, Mass.; Harvard University Press, 1978.

527 More recent approaches of constructivist educational theory negotiate ideas of scaffolding, coaching, reciprocal teaching, dynamic assessment, etc.
that informs their teaching) has to pursue ways to intentionally deepen and expand the content of purposive experience, to connect with the individual student’s prior experience.

Although the starting point of a didactic practice is the existing student’s experience, the next step is the gradual development of lived experience into a richer, more complete and better organized form.\textsuperscript{528} This need presupposes two conditions for the tutor. One is to determine the range of students’ lived experience, which is to discover the background of experience in individual students. The other is to find activities integral to this experience, which is to discern how elements contained in this experience will evolve, so that the tutor directs them to broader and more organised circles of knowing.\textsuperscript{529} In this discourse, the term ‘objective conditions of learning’ means all of the external elements with which the learners interact. Additionally, it means the sum of social interrelations, for situations with which the learner has been associated.\textsuperscript{530} From this point of view, while the tutor has the responsibility to control the objective conditions of learning (or else, to determine and direct the environment of learning), they also have to take into consideration the mission of education, the aims and the purpose of creating experiences for the learners. These parameters may be determined by the individual architectural school’s (educational) philosophy – what is often perceived as the school’s educational identity or idiosyncratic profile – before the educator deals with a specific didactic approach to fulfil it.

The exploitation of the Dewean concept of \textit{experience} for architectural education – and for the design courses, specifically – raises several questions, particularly surrounding the position, the effectiveness and the very meaning of a more specifically defined subject-matter. More precisely, a question arises about whether a concretely defined subject-matter is needed for teaching architectural design. In an affirmative case, the degree to which this subject-matter would have to be defined and organized poses a difficult question. This issue would open up, more explicitly than before, choices for educators that range between improvisation and (more) structured teaching, or else, between an interventionist and a liberal role for the tutor. Other issues would involve the didactic orientation towards past or future, or whether teaching should aim at impulsive or metacognitive learning, etc.

On another front, we realize, often from personal experience, that students decide to study architecture largely because they are motivated by an internal desire. In line with this, one indication of the fact that they do not make this choice entirely on the basis of reason is...
that they tend to disregard discouraging labour market conditions.\textsuperscript{531} Motivation by instinct and desire may be seen as a repeated pattern in the behaviour of architecture students. Later on, during their course of studies, it is also accepted that students’ impulse and desire constitute the motivating force behind for starting and advancing their project assignments. The ‘parti’ (the initial design idea, around which the design will later build) is thought to have the same origins.\textsuperscript{532}

On the other hand, the relative freedom that the design tutor may afford to students easily leads to the perception that freedom is identified with the possibility to immediately accomplish desires and impulses. Dewey importantly points to the confusion between impulse and purpose\textsuperscript{533} that this identification indicates. In fact, purpose-setting by the learner is a critical step in the learning process. While following the initial desire, a plan of action must precede, upon which the student will work. This is an intelligent act, distinguished from the activity as an end in itself. Hence, freedom is identified with self-control,\textsuperscript{534} which can enhance the responsibility of the student to participate in learning goal-setting as part of the educative process. Progressive education poses a central problem to didactics, inhibiting the immediate execution of desire, until observation, information and judgment intervene to help settle the experience. While impulse and desire will continue to fuel students’ work, intellectual growth happens only by reconstruction and the remaking of the initial impulse and desire. The old phrase ‘stop and think’ is sound psychology: thinking is the stoppage of immediate manifestation of impulse until impulse is brought into connection with other possible impulses for action, so that there be a more coherent and comprehensive plan of activity. This constitutes the tutor’s role in bringing forth the meta-cognitive dimension of learning.

In the end, it is intellectual anticipation, equipped with the students’ sense of consequences, and blended with impulse and desire, that will produce the motivating force for learning-by-doing. The compulsion to design (to ‘synthesise’) in architecture is best

\textsuperscript{531} This is a personal impression, not based on hard data at this moment. I assume that there have been such indications during previous periods of economic declines, when the number of candidates of architecture did not seem to decrease accordingly. The expansion of architectural education in the UK and the unabated demand for architectural studies in Greece may give such impression.

\textsuperscript{532} Nelly Marda, op. cit., p.249.

\textsuperscript{533} For Dewey, students have to acquire a sense of purpose in their learning, meaning that they will not be executing the purposes of others, thus being saved from becoming mental slaves. Their actual freedom is secured by the conscience of purpose and the resultant emancipation. In: John Dewey, op. cit., p.81. It is noteworthy to point to the commonness of the notion of liberation and emancipation that is echoed in Paulo Freire’s and Jacques Rancière’s later works. For this aspect, see also chapter 4.

\textsuperscript{534} John Dewey, op. cit., p.77.
understood as a reiterative process, which comprises intelligent activity on many different levels, from the large concept to the smallest detail of design.535

5.6.2 Constructivist teaching in the design studio

As earlier described, this thesis claims that the progressive education concept of experience is relevant to the present enquiry on architectural education. Progressive education is not obsolete, since its principles can be found in the roots of more recent educational theories, and the concept of experience remains of key-importance in many of these. Among the recent ones, constructivism seems to be the most relevant to contemporary architectural education. Teaching practices observed in the design studio exhibit some of the main characteristics of constructivist education.

Firstly, constructivist educational settings, much like the design studio, are student-centred; the activities are interactive and learners are actively involved in the process. The tutor facilitates the learning process rather than performing in accordance with a model of knowledge transfer. Teachers, instructors, and tutors are operating as facilitators of the students’ learning with the aim of emancipating students, who will eventually take control of the learning experience for themselves. As active learners, students are pursuing their own individual educational route through their living educative experiences.

In the constructivist view, even if a group of students from the same design studio are exposed to the very same objective conditions, each one of them will develop a particular, idiosyncratic set of understandings – the variable being the pre-existing experiential capital of each individual student. Similar to Dewey’s Theory of Experience, constructivism acknowledges the role of each past experience, which, in combination with present interactions, will create the presuppositions that allow the coming experiences to make sense, transforming the student’s perspectives into understanding. The tutor seeks to understand the student’s pre-existing conceptions and guides the activity to address them so that the new experience and the resulting conceptions build on the previous ones. In constructivism teaching approaches involve modelling, scaffolding, coaching and fading,536 and aim to increase the outcome of instruction for learners.

Firstly, modelling consists of providing students with a model of learning. The tutor who takes the initiative to design, alongside his students, during the period of ‘teaching’ in


the studio, and who articulates his design thinking and engages in a dialogue with the student, is actually providing the student(s) with a model of learning. At the same time, a tutor becomes a role-model themself, not only through what they are actually saying in their teaching, but even by the way that they behave, and ultimately by the way that they are. I am assuming here that we have a match with Dreyfus’ analysis of the stage of expertise by means of apprenticeship. It holds that the learner themself becomes an expert by imitating the expert teacher, provided that the (teacher’s) skills have not been broken down to constituent parts to be learnt, but, conversely, have been assimilated holistically, much like the teacher’s whole style and culture.537

The concept of ‘scaffolding’ as a metaphor is obviously derived from the construction domain. As Vygotsky has suggested:

[the educator] calls upon the services of powerful forces in the environment, directs them, and places them in the service of education538

Effective learning takes place when learners are receiving comprehensible input from the (educative) environment that is slightly higher than their actual level of competence. The supportive energies of the tutor (may consist of any, or a combination of, cognitive and metacognitive tools such as positive reinforcement, encouragement for the student’s efforts, Socratic techniques, etc.) will allow for the new, higher level to be assimilated. And so the process goes on. The tutor’s intervention is operating within the zone of proximal development: neither too high the expectations, nor too low the challenge. Scaffolding actually aims to gradually broaden the zone of proximal development.

The idea of fading in constructivist teaching suggests that the tutor at some point, after having exercised an intervening role in the educational process, aims gradually to step back, reducing their role of guidance within this environment in order to encourage independence and, ultimately, emancipation of the students. Whether the tutor will finally retreat backstage while education is still in progress is an issue for further discussion, but perhaps this is not unrelated to the coaching role. The expert coach, apart from providing expert guidance throughout the training, is also someone who can provide insightful perspectives that are not accessible to learners, all by distancing themselves from the scene to carefully and ‘objectively’ observe. In this context, the function of a coach is not far from that of the teacher-as-model. In the constructivist setting, students work primarily in groups,

interacting with each other and with the teacher. Students progressively build up self-regulation in the learning process (learning how to learn) while at the same time the tutor’s support fades out. The tutor helps only when it is necessary for the student to advance to the next cognitive step of the task. Hence, contingent teaching is taking place, making it a challenge for the tutor.

For the constructivist approach, learning may take one or more of the following forms: Question or Issue, Case study, Long-term Project, Problem. Some of these are not unknown to architectural education. Generally, the problem-solving and real-world problem-solving approach is driving learning in constructivist learning environments as it is happening in the architectural design studio and in the Live project. It is characteristic that learners are introduced to any content or theory (often, in the form of contextual information) only when they have a problem at hand, and in order to solve it, unlike in traditional objectivist approaches where theory precedes, and the problem follows as a practice of theory. This is what essentially differentiates the design studio and the Live project teaching from the teaching in other conventional courses of the architectural curriculum.

In constructivist teaching, instructional targets may take different forms. They may aim at learning domain knowledge, either declarative (knowing ‘that’) or procedural (knowing ‘how’). Alternatively, they may aim at developing meta-cognitive knowledge: learning about one’s own learning, leading to students’ self-regulation. Finally, they may aim at learning ‘how to adapt to a particular instructional context’ (understood as help-seeking behavior). What is specified in constructivism as ‘facilitation’ is the tutor’s control of the objective conditions of learning – as discussed in Dewey’s *Theory of Experience* – which can be either procedural or substantive.

In the case of procedural facilitation, in order to scaffold the task, students are introduced to self-regulatory mechanisms. This means that the tutor offers examples for the student to imitate and may set up structures of self-monitoring for the student. Further, the tutor limits the number of choices for the student so that she or he is not lost on the way towards discovering a solution, while also making the cognitive process visible. This means that the tutor facilitates the development of the student’s meta-cognition, and may be doing it by articulating and making visible apparently intuitive processes. Donald Schön has

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540 Ibid.
provided rich descriptions of such educational situations in the architectural design studio tutoring.\textsuperscript{541}

In another way, constructivist theory describes the process as providing labels for the student to categorise and organise tacit knowledge. At the heart of the constructivist approach we find the tutor’s responsibility to cast procedures corresponding to the level and needs of the learner. In substantive facilitation, on the other hand, the tutor provides explicit guidance on the conventions and standards in the domain. Since the constructivist approach has encapsulated principles and ideas of earlier educational theories, which also challenged the objectivist paradigm, I will now try to summarise the characteristic differences of the constructivist educational paradigm from that of conventional education\textsuperscript{542}.

In the objectivist approach there is one correct way to structure the world in terms of properties, entities and relations, whereas the constructivist approach holds that there are many ways to structure the world, determined by the experience and interpretations of the learner. Where the objectivist approach asserts that no prior knowledge or experience is required, because prior knowledge might cloud understanding, the constructivist approach claims that new knowledge is built on prior knowledge and experience. Objectivism views meaning as external to the learner and independent of the understanding of the learner. Conversely, constructivism suggests that meaning is imposed on the world by us and is indexed by experience. In the objectivist view, knowledge can be fragmented into specialised categories [that constitute educational content or what is to be learnt by students]. On the other hand, constructivism views knowledge as integrated [undividable] and proceeds from simple wholes to complex wholes. In conclusion, the objectivist approach to education praises the universal (irrespective of self, independent of time and place) and justifies the teacher-centred model, while the constructivist approach emphasises the contextual (rooted in self, time and place) and justifies the learner-centred model of education.

\textsuperscript{541} For more on this see chapter 2 and also: Donald Schön, \textit{The design studio: an exploration of its traditions and potentials}, London: RIBA Publications for RIBA Building Industry Trust, 1985. Also note the common elements with progressive education that Schön’s perception of self-directed, emancipating learning presents: ‘I have come to feel that [the] only learning which significantly influences behaviour is self-discovered, self-appropriated learning,’ in: Donald Schön, \textit{Educating the Reflective Practitioner}, San Francisco: Jossey-Bass, 1987, p.89.

\textsuperscript{542} I am drawing from the table of comparison (‘Figure 1’) originally published in: http://www.personal.psu.edu/txl166/kb/theory/obj_con.html, as quoted in S. Badrinarayanan, \textit{Development of Indian Traditions: Constructivist Approach in the design studio}, INTBAU Conference on ‘New Architecture and Urbanism’, New Delhi, January 11-14, 2007 [Retrieved 29.04.2008].
5.7 Discussion of the pragmatist approach

This thesis has proposed J. Dewey’s pragmatist understanding of experience along with the phenomenological framework, in an attempt to inform architecture’s descriptive didactics. Although old, the theoretical framework of progressive education is not obsolete. It is ‘alive and well in twenty-first century theories of education.’ The idea that experiencing and learning are activities that affect individuals, as long as they take place in socio-cultural contexts, has survived in contemporary theories of learning such as Jean Lave’s Situated Learning theory, and is continuously informing key-concepts such as Vygotsky’s Legitimate Peripheral Participation. In architectural education, the field trips are an example of situated learning, as any other form of participant-observer studies in an alien environment or culture are. Constructivism is also a theory that shares fundamental premises with Dewey’s pragmatist approach to education and continues to be influential in most recent theoretical accounts of learning.

The ‘progressive’ idea that each student is an active learner, who follows an individual educational route, has been elaborated in constructivist terms into another, which asserts that each learner constructs individually his or her own set of understandings out of the common stimuli provided by the shared educational situation, ‘building’ upon their own (not shared) pre-existing experiences. Since understandings are built individually, they result in different bodies of ‘knowledge’ to each one of us (not excluding the teacher’s knowledge), so that none of us can access the world of another’s experience. In a way, this means that we are ‘imprisoned in a world of our own making’. Philips and Siegel point to the solipsistic quality of this idea. The described complexity makes manifest the great difficulties a tutor has to overcome. This very issue has produced thousands of references in education journals during the last two decades.

The main objective of the thesis has been the exploration of ways by which to equip architectural education with its specific didactics, which architecture is lacking so far. These efforts cannot but shed light onto the teaching subject (the tutor) and his or her practices. Dewey’s underlying perception of education (in the Theory of Experience) as the continuous reconstruction of experience provides the opportunity to place the tutor at the centre of

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544 Ibid.
545 Denis Charles Phillips and Harvey Siegel, loc. cit.
attention. The tutor, in light of this perspective, is seen as the agent responsible for the creation of the purposive experiences for the student to become an architect. Through Dewey’s focus on the concept of experience, we are essentially focusing on the actions of the tutor.

Examples from the history of educational theory have shown that during periods of transition and change educational thinkers either develop theories where the teacher holds the important position in the re-negotiation of education or the teachers themselves claim such a position. John Dewey’s case is an example. We also mention a later example from 1960s U.K., the educationalist Lawrence Stenhouse, who sought to promote the active role of teachers in educational research and curriculum development. His systematic work led to the founding of an influential school of thought, an area of action-research in education. Another example of influential work that stressed the role of the teacher was that of Donald Schön in the 1980s – one with particular implications for architectural education due to Schön’s focus on the design studio features. In our own era, and in the context of general transformations, Mark Dorrian describes the present condition of architectural education as one in which it seeks to reinvent for itself purposes and roles that would justify anew ‘an expanded agency and intensified relevance for architecture’. In this state of renegotiation and redefinition, the role of those teaching in architectural education cannot remain undiscussed.

The school is the field where participation, interactions and communication take place, thus making for the situational influence of one’s experience. The student’s active participation in learning is maximised under two conditions: the experiential nature of learning – secured by such forms as problem-solving – and the political nature of formal education (of schooling), since the latter is embedded within community structures.

It is worth noting that the pragmatist educational paradigm distances itself from both poles of the classic antithesis (or bildung) approach, and the technological (utilitarian)

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547 The University of East Anglia became the centre of action-research development with key-figure John Elliot. A second institution in Australia was the University of Deakin, where Stephen Kemmis worked on combining action-research with critical theory and the Frankfurt School works. For more on Lawrence Stenhouse see also J. Elliott and N. Norris, Curriculum, Pedagogy and Educational Research: The Work of Lawrence Stenhouse: Routledge, 2012.

548 As discussed previously, in his book ‘The reflective practitioner’ Schön provides thorough descriptions of the architectural design tutor, which became influential to the degree that brought architectural education as a model for all professional education.


550 The German term for education, closest to the Greek notion of παιδεία. Both, ‘παιδεία’ and ‘bildung’, involve the meaning of education and formation combined. In this sense, education refers to a process of becoming of the human being with regards to its humanity as well as to its innate intellectual capacities. The concept has been discussed more extensively in chapter 1, section 1.3 and in chapter 3, section 3.9.
The experiential model of Dewey takes a critical stance towards the *bildung* paradigm with regard to its blindness for societal developments that had an impact on education, i.e. technology. On the other hand, it remains equally critical of the utilitarian or technological paradigm of education, as Dewey criticised technology for monopolising rationality and for putting method before experience, thus splitting up things that ought to be together (namely, *means* and *ends*). Dewey, however, acknowledges that certain forms of technology are needed in society.

With the coming of pragmatism in educational philosophy, the focus shifted from problems of consciousness onto problems of action. As far as this enquiry is concerned, the concept of *experience* in Dewey’s theory, structured as it is by the two principles of continuity and interaction, proved useful in helping us propose a way to address questions at the level of didactics (i.e. the free vs. the more disciplined approach to teaching in the design studio), hence, setting the foundations for a descriptive didactics. The approach is not lacking a holistic understanding of the learning phenomenon, one reason why, instead of being too focused on content, it balances attention between content and process issues. There is wholeness and continuity in human behaviour, for stimulus is not independent of response. It is the wholeness of the situation (coordination between stimulus and response) that determines exactly what will be experienced by the individual learner as stimulus and response. I hope that it is now clearer why acknowledging the indivisible quality of *experience* into constituent parts, as the *Theory of Experience* holds, is essential in adding to the understandings of the teaching and learning phenomena in architecture. I tend to adopt the idea that in spite of all our analytical and interpretative efforts, whether empirical or theoretical in origin, there will always be an area of the teaching and learning phenomena that escapes us, since our perceptual instruments cannot capture it – much like our vision’s blind spot.

We may keep on filling in lists of results from our analyses with harder or softer data pertaining to what is (good) teaching and learning, what makes a (good) teacher, what is

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551 For more on this category see also chapter 1, section 1.3 and 1.3.1.2, and chapter 2, section 2.2.
552 For Dewey, *experience* is a continuous human behaviour and any discontinuities are artificial.
553 A particular *blind spot* known as the physiological *blind spot*, ‘blind point’, or punctum caecum in medical literature, is the place in the visual field that corresponds to the lack of light-detecting photoreceptor cells on the optic disc of the retina where the optic nerve passes through the optic disc. The definition is available from: https://en.wikipedia.org/wiki/Blind_spot_(vision) [Retrieved 19.12.2016]. Humberto Maturana and Francisco Varela explain that what is not usually stressed about the blind spot of our vision is that paradoxically, we are not going around with a hole of that size all the time and instead, our visual experience is of a continuous field. The blind spot is perceived as a discontinuity only by performing ingenious manipulations. By this fact they substantiate the metaphoric idea that we do not see what we do not see, and indicate its cultural implications. In: Humberto Maturana and Francisco Varela, *The Tree of Knowledge, The Biological Roots of Human Understanding*, Shambhala, Boston and London 1998, pp.18-23.
(good) content and what are (good) methods, but may remain with the sense that there will always be something missing – a critical ‘uncountable’ quantity (or unaccountable quality?) to even the balance at the end. I dare to imagine that this area will always be moving ahead of us, always uncharted, despite our continuing advances towards knowing. I also think that the best we could possibly do is to acknowledge it in addition to anything else that is tangible, and accept it and believe in it, as this will probably make us more efficient researchers and, even, better teachers. This area may well be an area of tacit knowledge, largely experience-based, referring to intuitive, hard to define knowledge. Perhaps it was this intangible, and beyond-the-sensible entity that Jacques Rancière presented his teacher empowered by to essentially teach his students, in the parable of the ignorant schoolmaster.\footnote{Or even more graphically, in the same book, Rancière presented the illiterate mother who was able to coach her son on school studying.} In that teaching, we come to comprehend the idea of the ‘wholeness’ in Dewey’s pragmatist notion of experience, which is undividable, which cannot be analysed in parts since it is a unity of knowledge, of a (pre)disposition and of an ethical, emotive and physical engagement with the teaching and learning situation. It could be, perhaps, the disinterested commitment of the tutor to the cause of teaching. Here, we may also see the congruence of Dewey’s pragmatism with Dreyfus’s phenomenology, in the very idea of ‘wholeness’ and ‘implicitness’ as they find their expression in the notion of ‘intuition’. At this point it is hard not to recall Sir Peter Cook’s expression of the architectural school as ‘the place where you can expose the passion of partisanship and involvement’.\footnote{In the 2008 Oxford Union Debate. See Appendix 1, Peter Cook [13:36/34:41] – opposition, p.199.}

The \textit{Theory of Experience} is comprehensive precisely because it can address issues of pedagogical order, while at the same time it is prepared to change the focus of its lens towards the scale of didactics, and it is doing so all by maintaining consistency. As becomes evident, it is efficient in addressing questions of such a scale as a person’s citizenship,\footnote{In the sense of the character of the individual viewed as a member of society, and of the behaviour in terms of the duties, obligations, and functions of a citizen. This definition is available from: http://www.dictionary.com [Retrieved 13.06.2017]} while also being instrumental in regard to the details of teaching practices in the classroom or the design studio. In this sense, it serves as an example of how pedagogy and didactics can consistently intersect – an example that would be beneficial for all enquiries on and attempts to theorise architectural education. From the outset, this thesis had among its objectives to explore the problem of how big pedagogical questions, often entangled with the discussion of architectural education, could be accommodated in an enquiry into its missing theoretical didactics.
Having said that, I would like to point out that theory is not panacea and, perhaps, there is a question of balance to be considered. This is how Sir Peter Cook described such a sense of equilibrium between theory and practice (literally, between school and office) in his representation of the ideal architectural school:

[architects-educators] are up there building [stuff], and bringing it back to school to turn it over, and back into office, and pulling the talent out of the school, back into office and round and round\footnote{See Appendix 1, [06:40/34:41] – opposition.}

Besides, Dewey suggested in the ‘Theory of Experience’ that theory must be indivisible within practice. The essential premise of Dewean pragmatism regarding the unity between experience and method – namely the unity between ends (pedagogy) and means (didactics) – is ensuring for our theorisation of architectural education the consistency that is missing from discussions on architectural education so far.
6 Conclusion
6.1 The conditions around this research

At the close of this thesis one might ask two overarching questions: ‘what need is there for research into this area of architectural education?’ or, ‘what is the relationship between this research and actuality?’ One might answer these questions, even aside from the conclusions of this thesis, by reference to the general conditions, contingencies, frameworks amongst which this research is situated, particularly as they currently stand (in 2017).

On an international level, one of the events that marked this year was the rupture of the group of nations that were previously committed to counteracting global warming and climate change, with the official withdrawal of the U.S. from the ‘U.N. Paris Convention’. The decision was informed by the alleged ‘alternative’ information to previously accepted scientific evidence concerning the impact of human activity on the environment and the resultant severe risks to the planet’s survival. In general, it appears to be the case that the multifaceted and often controversial character of large scale problems in ecological, economic and socio-political domains – such as the recent global economic crisis, the global refugee crisis, and the rise of populism in Europe and America – have made it difficult for large sections of the general public in the developed world to perceive and make sense of. This is not helped by recent appeals to ‘alternative sources’, fake news and conspiracy theories from various sections of the public that – paradoxically – have more access to information through technology than ever before.

As this general tendency is made more manifest, there is, as a result, increasingly a sense of disbelief in, or challenging of, science and rationality. One example of this is the anti-vaccination movement that encourages the public to refrain from participating in established vaccination routines. In turn, this threatens the effectiveness of public health programmes, and has the potential to result in the return of serious infectious diseases (such

558 Officially known as the 21st Conference of the Parties (or ‘COP’) to the United Nations Framework Convention on Climate Change (UNFCCC), Paris 2015. The Conference also served as 11th Meeting of the Parties to the Kyoto Protocol, to oversee the implementation of the Kyoto Protocol and the decisions made to increase its effectiveness. Available from: www.un.org/sustainabledevelopment /cop21/ [Retrieved 06.08.2017]

559 ‘The ‘anti-vaccination movement’ is a loosely organized subculture based on conspiracy theories which blame the medical practice of vaccinations for a wide range of health problems. The movement, to a large majority led by people with no medical or scientific qualifications (or, ironically, stripped credentials), is based largely on spuriously alleged short- and long-term side effects of vaccination. Effects which are - to boot - often trivial when compared to the severity of what were once common illnesses.’ Available from: www.rationalwiki.org/wiki/Anti-vaccination_movement [Retrieved 22.07.2017]
as measles\textsuperscript{560} in parts of the world where they had previously been eliminated. Another example is the rising number of global warming deniers in the US.\textsuperscript{561} Additionally, the increasing use of the term ‘fake news’ in public discourse, in conjunction with the dispersion of unmediated news via the internet, exemplifies the purposive appropriation and distortion of the authentic tendency of questioning that (educated) publics would have in their struggle for accessing truth.

Indeed, we might legitimately question the impact of this apparent failure in contemporary science and technology in relation to these health and environmental issues, and likewise in terms of its role in supporting mass media bias. However, it seems that in some instances public opinion is confused or disoriented, in the sense that people’s (otherwise effective) critical reflexes seem to be triggered in response to inappropria\textsuperscript{562}e causes, something that would suggest a general sense of confusion. It is in light of this alarming level of confusion and disorientation that the role of education becomes critical. It seems that there is an urgent need for education (particularly in higher education, since an increasing number of people in the developed world are accessing it) to maintain its connections with reason or rationality, and to uphold learners’ critical capacities, while at the same time facilitating for the emergence of the legitimate new. This is exactly the account of education that Gramsci had in mind, when he claimed that everyone ought to go through classical education:

Scientific ideas were intended to insert the child into the societas rerum, the world of things, while lessons in rights and duties were intended to insert him into the State and into civil society. The scientific ideas the children learnt conflicted with the magical conception of the world and nature which they absorbed from an environment steeped in folklore; while the idea of

\textsuperscript{560} The World health Organisation (WHO), as of June 2017, issued a warning about the outbreak of children’s measles in Europe, with 35 casualties already counted in Europe during the past 12 months, as the tragic consequence of the ‘anti-vaccination movement’. Despite the availability of a “safe, efficient and pricey vaccine’, measles remains one of the basic causes of death among the child population. As an example, the WHO reports from Italy that the cases of illness have increased dramatically, from 844 recorded cases throughout 2016, to more than 700 for the first quarter of 2017 only, and the total counting 3300 for the period of June 2016 through June 2017, with two casualties among adults so far. In another example, Romania has reported 31 deaths during the same period.

civic rights and duties conflicted with tendencies towards individualistic and localistic barbarism—another dimension of folklore. Following Gramsci’s line of thought, classical education (such as the instruction of Latin or mathematics), more than offering practical skills, instils disinterestedness (knowing for knowing) and objectivity (dissociating from subjective ends). He suggests that those ideas and practices that see parts of education, concerned with objectivity and disinterestedness, as ‘superfluous’ (in the name of realism and instrumentality), have failed to help large sections of the public to appreciate logic and critical thinking. Neither, he claims, have they influenced the development of learners’ self-understanding and knowledge of their place in the world. This, he thinks, is a role that education ought to play.

Architectural practice not only has the responsibility for the resources it utilises and the imprint on the environment that architectural work produces, but also constitutes social action, influencing people’s interaction with the world. This is because assumptions about people’s lives, societal functions and environmental balances form the basis of architectural plans. Architectural education cannot but share the responsibility of education (more generally) to dissolve unreal phantasms, arbitrary assumptions and inclinations towards irrationality vis-à-vis younger generations. Many young people are at risk of confusing fake news for real news, information for knowledge, disbelief for legitimate criticism and conspiracy theories for critical thinking. Likewise, architecture students might be at risk of adopting an ‘orientalist’ view of issues and the world, and even a kind of ‘idle curiosity’ vis-à-vis public affairs. If we are to think about and plan for changes in any aspect of education, including architecture, with the purpose of remedying these and similar problems, then we would need to establish ways for these deliberations to be productive and conclusive. This thesis claims to do exactly this: to establish some of the foundations required for a theoretically articulate approach to future discussions and enquiries about architectural education, so that propositions and actions are grounded in reason and, hence, are more likely to find success (i.e. in producing effective solutions).

6.2 General Conclusions

The objective of the thesis has been to address the topic of architectural education from a unique perspective in order to complement previous field-centred research by

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563 For more on Edouard Said’s ‘Orientalism’ see also section 4.4.2.

564 Meaning the risk-free, without real commitment ‘engagement’ into searching information. More on this S. Kierkegaard’s notion is discussed in sections 4.4.2 and 4.4.3.
supplementing it with a non-empirical, analytic approach. This thesis was motivated by the *aporia* that comes from asking how we can situate enquiries concerning better teaching and learning in architecture in the context of broad pedagogical (philosophical) issues. Indeed, the current debate on architectural education often raises questions which are primarily pedagogical in nature. Pedagogical theories are predicated upon value assumptions and choices about the nature of human beings, the value of specific forms of content and learning opportunities for students. However, the self-reflections of architectural educators and their dialogues with colleagues may constitute a theoretical form of didactics, albeit one that is not of a scientific form. The thesis draws from examples of architectural education in the U.K. and from previous research undertaken in the U.K., as well as from relevant deliberations from the international educational scene.

Overall, the current thesis is the result of a non-scientific research approach that is not restricted to any one discipline. The research around which it is structured is neither strictly qualitative nor strictly quantitative. More specifically, this research – although interpretivist, non-quantitative, non-positivist and non-objectivist – does not focus on the particular subjectivist understandings and meanings. Hence, it does not resort to the production of original qualitative data by means of respective methods, such as interviewing, (participant) observation, recording, etc. Instead, through the framework of established philosophical theories, it proposes an alternative reading of the educational phenomena that take place in two of architecture’s educational tools. As a result, a number of shared meanings and normative recommendations are made possible by the research undertaken in this thesis and are thus made available for future enquiry.

By aiming to develop an educational theory for architecture (for which more research is required), rather than solving practical educational problems, this study ought to be classified as ‘basic research’ within the basic-applied continuum. The limitations of this research are identified along with its particular characteristics as mentioned above. As is the case with any research endeavour, this thesis offers an abstraction of the whole. It does not claim to have captured the full breadth of the topic; rather it provides a partial comprehension of what is ultimately a complex field.

The research began with the introduction of two cases of public discussion about architectural education, which the author attended and subsequently analysed. They were found to present unusual, paradoxical, or ‘extreme’ arguments and positions, and for the sake of this thesis they constitute instances of *discussion at the extremes*. One was the Oxford Union Debate of 2008 on architectural education, with the motion that architecture would be better off without schools. The other was the International Conference on Architectural
Education, Beijing 2007, where in his keynote lecture Alexander Tzonis proposed the establishment of architecture’s ‘teaching hospital’.

The discussions at the extremes were useful to this thesis for two reasons. One was that the extremes revealed the a-theoretical character of such deliberations, in that they lack clear connections with educational theories, and paved the way for the main argument that this thesis developed; the need for a distinction between didactics and pedagogy. The second reason was that they help to extract questions ‘worth asking’. These fundamental questions ought to clarify the landscape of inquiry and further stimulate productive reflection (rather than lead to predictable definite answers). A dialogic approach was employed to analyse, discuss and amplify the arguments of both cases in an attempt to develop questions which express the dilemma of whether the learner of architecture performs better when relying on the inner creative self or in communion with others. Key issues that were central in the discussions, such as concerns about ‘reality’ and the ‘real’, the role of the teacher and the teacher-student relationship, different modes of learning, and the purpose and role of (higher) architectural education, touch on the key issues in architectural education.

A historic account of architectural education, primarily in the U.K., from the medieval era until today, revealed the evolution of architectural didactics as part of the teaching approaches of the twentieth century. It allowed the tracing of the inherited, historic tensions between professional practice and education that is reflected in many of the characteristics of architectural education, present today.

To practically address the identified problems, the thesis concluded by proposing a version of descriptive didactics specific to architecture, so that future choices about the didactics of architecture can be justified and grounded in theory, both of didactics and pedagogy. This is the main contribution of this thesis to the field of architectural education. The proposed approach to descriptive didactics arose from the combination of traditionally generated detailed descriptive data, already produced by previous research and employed critically here, and the non-causal process of philosophical explanation that the thesis developed. This hybrid method was used to investigate the logical, theoretical and philosophical presuppositions and consequences of architectural education. Two distinct theoretical frameworks – pragmatism and phenomenology – were employed for the study of architecture’s two didactic tools, the Design Studio project and the Live project. The approach was dialogic, attempting to bridge the two perspectives.
6.3 The contribution of the thesis to the field

This thesis claimed that in order to theoretically address issues in architectural education we need to first clarify the basic concepts used in current debates. In particular, it was suggested that indiscriminate use of the terms ‘pedagogy’ and ‘didactics’ in discussions about architectural education are a serious source of confusion.

The self-reflections of architectural educators and even their own dialogue with colleagues can be seen to be constitutive of a theoretical form of didactics, yet one that is not of a scientific form. The situation seems to reflect a gap between a (potential) theoretical form of the didactics of architectural design and contemporary theories of learning and teaching. Alternatively, pedagogies imply evaluative and normative theories as they embody intentions and interests tied to historical, cultural, and socio-political contingencies. Architectural pedagogy is predicated upon value assumptions, and ultimately choices, about the nature of human beings, and the value of specific forms of content, and learning opportunities for students. The thesis builds on the assumption that in the current debate surrounding architectural education the questions are primarily of a pedagogical order, although the identified problems pertain to the domain of didactics. The analysis of such discussions in Chapter 1 confirmed this assumption.

The thesis argues for a need to distinguish between architectural pedagogies and architectural didactics. In this respect, it distinguishes between the normative character of pedagogical propositions (what should be) and the descriptive or scientific grounding (what is) of didactics. Over the course of the thesis, the distinction allows for, on the one hand, the emergence of essential questions about the field from a clarified debate on architectural education, and on the other, an enquiry into and understanding of architecture’s primary educational tools i.e. the studio project and the Live project.

Pedagogy, the theory of normative character, prescribes what should or ought to be done in education. As such, 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 – hence, the synchronic relation of pedagogy with the educational situation. 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 aims to understand and describe it. It places the emphasis on knowledge and true beliefs, and with the observable and (sometimes) measurable characteristics of human nature.

Therefore, it would be fair to assume that while pedagogy addresses attitudes (what should be) and even desires, didactics addresses facts (what is) and reason. Attitudes and
desires are motivating forces for human action. Desires need the guidance of reason in order to achieve success and for the sake of self-justification. Besides, we tend to perceive reason as instrumental: there is no content for reason without desire.

In Chapter 3 the thesis reintroduced didactics, reviewed the complicated relationship between didactics and pedagogy established in educational theory, and claimed that architecture is in need of its own, specific didactics. To this end, it proposed a more balanced and conclusive approach to architectural education, by shifting the focus from pedagogy to the didactics of architecture. In order to do so, it developed a conceptual distinction to be employed in educational discourse, suggesting that the term ‘didactics’ be used in place of the indiscriminately used term, ‘pedagogy’. Furthermore, the chapter proposed the use of the term ‘didactic’ in the place of the adjective ‘instructional’.

At this major point in the theoretical enquiry, the thesis discussed whether there is a logical relation between the normative and the descriptive parts of educational theorizing in terms of architectural education. Furthermore, it discussed the possibility of using a descriptive theory (i.e. a scientific learning theory) to deduce a normative theory – or vice-versa – and in doing so, in chapter three the thesis revisited David Hume’s ‘is–ought’ gap to explore the prospects of a logical bridging between ‘is’ with ‘ought’. The is a relevant question to architectural education: it might prove practically useful in letting us know whether long-established teaching traditions, practices, subject matter etc. in architectural education are relevant to or directly associated with specific normative theories (pedagogies) about issues such as the kinds of architects that are necessary to our society, what it is essential to know, and so on.

Briefly, the question of whether implementing a didactics of architecture could be developed alongside a concrete pedagogy (and vice versa), could help us address the overarching question of this thesis: “How the broad philosophical and political questions about architectural education, which inhibit its public discussions and reflections, could be accommodated in terms of architecture’s didactics”. Obviously, this can be the starting point for more empirical research.

The thesis connects the present enquiry on architectural education with a triad of educational theories, to inform the arguments and the model for a descriptive didactics of architecture that this thesis is proposing. In chapter four, the thesis provided an exposition and analysis of Freire’s Theory of Education for Liberation as an example of compelling philosophy of education (pedagogy) that has been consistently articulated by special didactics, and implemented in the field. It addresses the needs of the learner as individual, but at the same time has proven to be effective, at the larger scale, in society. The theory has
been paradigmatic in exploring the inner mechanisms of education, which is a necessary condition for conceiving and designing any intervention in education. This makes it a model for the kind of theory that can reliably address the types of enquiries raised in the Oxford Union Debate and by Tzonis’ proposition. Moreover, the thesis views the Theory of Education for Liberation of Paulo Freire as related to the other two, via Dewey’s pragmatist concept of experience and Dreyfus’ notion of commitment and involvement.

At the last part of the thesis, Chapter 5 recapitulated the fundamental question as it emerged from the two paradigmatic cases of discussions at the extremes, about the primacy of either the socio-cultural contexts or of the inner creative self over learning and teaching in architecture. In the previous parts of the thesis, the shortcomings of the ways by which the question arose in the discussions at the extremes were made evident. The question indiscriminately addressed aspects of pedagogy and didactics, resulting in the proposed responses respectively inconclusive. Subsequently, an attempt was made to reconstruct the question in the context of selected texts from educational theory. Primacy of the one or the other seemed not to be a real issue – and made the question appear to be a pseudo-dilemma.

The question as to whether learning is more successful in Republic or in Solitude became the starting point, underlying deliberations about learners’ meaning-creation and meaning-making. It was shown that both sides of the dichotomy are involved in this process. Next, in support of the present thesis, the need for a model that offers a descriptive didactics of architecture was demonstrated. This is not just for the sake of scientific interest of getting to know how learning takes place, but rather because a descriptive approach to didactics is necessary for a normative didactics to develop, should this be ever deemed necessary.

In proposing a descriptive didactics, the thesis does not adhere to a single theoretical paradigm, and thus avoids engaging with only one approach to observing teaching and learning phenomena. As an alternative, it proposes a hybrid model which addresses both the implicit and the explicit domains of knowledge. Usually, we tend to assess architectural education as a kind of science education (architecture itself has a component of science, at least partly). But it should be noted that architecture is not wholly scientific and this chapter attempts to emphasise the need to also address what is not measurable by means of science (be it cognition, psychology, neuroscience, etc.). What’s more, there is also a need to address those aspects of architecture which involve implicit or tacit knowledge.

Previous empirical research has suggested that students at the design studio need to use both analytical (what could be seen as hypothetical and deductive, rational and deterministic) and non-analytical (such as visual, creative, intuitive) modes of thinking. Indeed, students – as well as designers themselves – operate within a continuum between the
two, in what has been described as a reiterative process of thinking between the visual and the rational.

Unlike traditional approaches to architectural education, this thesis argues that what is needed is a descriptive model that will allow for both (if not all) ways of learning functions to be captured. Problem-solving design processes cannot rely exclusively either on explicit, rational approaches, or on intuition and implicit knowledge.

The hybrid model proposed here draws from both a pragmatist and a phenomenological standpoint. On the one hand, the thesis relied upon the Dreyfus model of skill acquisition, as it has been, specifically for this thesis, translated for architecture. It is a phenomenological model and as such it is deemed philosophically important by virtue of shifting focus onto universal structures of embodied cognition – in effect, its account of skill acquisition is analysed in distinct stages. It places the learner at the centre of focus – something unusual for enquiries on architectural education. Focus on the learner is central because imagination, creativity, motivation, and interests are determined by the learner. This feature of the approach makes it an essential component of the model this thesis proposes. Notably, the Dreyfus model analyses the learning process phenomenologically from the first-person perspective, providing deeper insights, in contrast to the partial and sometimes more shallow treatments that come from a third-person (objectivist, traditional) perspective. Moreover, the phenomenological model focuses on implicit knowledge and investigates intuition as the area of ‘how-to’ knowledge, which is difficult to define and to communicate. It addresses the type of learning that is based on lived experience and is rooted in action, and hence is largely personal in nature and context-dependent. The learner’s commitment and involvement are essential to this perspective. Likewise, detachment and metacognition are seen as inhibitive of knowledge.

On the other hand, the proposed model also draws on John Dewey’s pragmatism and particularly on his concept of experience. By implication, it draws also directly on educational constructivism and other relevant contemporary theorisations, such as of ‘Situated Learning’, the ‘Zone of Proximal Development’ and scaffolding. This means that the proposed model views learning as the continuous reconstruction of a student’s experience, all by acknowledging each student’s individual understandings as they shape “a world of our [their] own making” – suggesting a preference for learning in Solitude. As we obtain better understanding of the role of experience and of the way it sediments into each student as ‘knowing’, we become increasingly aware of the focus shifting towards the actions of the tutor – perhaps more than in any other paradigm. Thus the proposed model points beyond just contextual and internal (implicit) factors, to the agency of the tutor.
Explanations of learning can now be directly linked with the tutor’s own actions, such as his or her role in creating the student’s educative experience or in operating knowingly within the student’s zone of proximal development. While the pragmatist approach, on which our model heavily draws, appears not to consider the third factor of the didactic triangle, the content, it becomes evident that the (educative) *experience* is emphasised and treated as the content of teaching *per se*.

Last but not least, the fundamental premise of Dewan pragmatism of the unity of *experience* and method (that is, the unity of ends and means) ensures that the proposed theory of architectural education consistently balances both architectural pedagogy and architectural didactics. The *Theory of Experience* is paradigmatic in that it associates issues of pedagogy (i.e. a vision for society and the role of education in it) with realistic proposals for their delivery in educational practice by means of didactics.

In conclusion, what is proposed by this thesis is a model which, by being attuned to the idea of plasticity, acknowledges the complex interplay between learning in *Republic* and learning in *Solitude* and suggests that learning takes place in both conditions as students constantly shift between experiencing the surrounding world with its established meanings and renegotiating inherent ways of making sense of the world. At the same time, the model provides a deep understanding of the phenomena that take place in architectural education’s two didactic tools (studio and live) and thus offers a valid descriptive didactics for architecture.

### 6.4 Epilogue

This thesis intends to open up and stimulate the discussion about the didactics of architecture and also to provide a framework for further research into this area, based on one hand on the distinguished categories ‘didactics-pedagogy’ and on the other, on the proposed descriptive didactics model. Relevant questions to be explored could include, but not be limited to, the issue of consistency between implemented didactics and pedagogies, the problem of a subject-matter for architectural education and the optimum balance between impulsive and meta-cognitive learning.

An architectural school may determine its *mission* of educating, and set the aims and the purpose for creating educational experiences for its students. Such parameters pertain to the educational philosophy, which is often manifest as the school’s educational identity. The tutor, on the other hand, is responsible for controlling the objective conditions of learning, that is, for determining the environment of learning as part of implementing a specific didactics. Educational theory may or may not underlie the teaching practice and methods in
the studio or the Live project. A category of questions for further research would examine the implemented didactics for consistency against the school’s espoused theory (philosophy) of education, in other words, its pedagogies.

The issue of a subject-matter and its organisation by the educator, whether the educational experience is a form of subject-matter in its own right, and whether the acquisition of experience, by students, can be uncontrolled, cursory and accidental, or, following the constructivist principles, a well-planed purposive process, could inform such research questions.

Another topic that could be investigated is the educator’s choice between improvisation and structured teaching. In other words, the issue for architectural education becomes the appropriateness of the liberal or the interventionist role of the design instructor. Improvisation would prevent teaching and learning from becoming stereotyped and would also provide fresh views in teaching, therefore can be seen as a positive attribute. However, it seems debatable whether the selection and organization of the content of subject-matter can take place in a cursory manner.

From another point of view emerges the question of opting either for impulsive or meta-cognitive learning. In architecture, impulse and desire are often the starting point for conception, synthesis and creation. The issue here becomes whether learning can be deep and foundational for development of future learning – especially when it relies exclusively upon impulse and the ‘first act’. If there is intellectual development to take place, what would be the impact of reconstruction and remaking of impulse and desire – of ‘stop and think’ – and how could this be measured? Could inhibition of impulse in its first state constitute a meta-cognitive, alternative approach to learning in architectural design? Under what terms could that happen?
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Appendices
Appendix 1

The Oxford Union Debate – Transcript
<table>
<thead>
<tr>
<th>Speaker</th>
<th>Time</th>
<th>Remarks</th>
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<tr>
<td>PETER BUCHANAN</td>
<td>[0:44/34:41]</td>
<td>I propose the motion, which is that architecture would be better off without architectural schools and the thrust of my argument is that architectural schools have fallen far behind practice and that education you get is no longer relevant to the very changed world in which practice operates.</td>
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<tr>
<td>PETER COOK</td>
<td>[01:04/34:41]</td>
<td>I think that we as a civilization very much depend upon a whiff of abilities – not the persons – and our creativity, and I think in the end education is about survival – architecture is about survival basically. It’s a construct [that] is erected around the idea of survival. So, I guess it’s broadly my line-in rather than supporting the institution per se.</td>
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<tr>
<td>ROBERT ADAM</td>
<td>[01:28/34:41]</td>
<td>Reasonable that schools teach something that practice doesn’t, if this is advanced thinking… They definitely have a place, no question about it. They don’t have a place distinct from the making of buildings. So, the relationship between what happens in schools and what happens in practice should be very much stronger. Not for the sustainability or the new ways of life point of view. For the good of the students.</td>
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<tr>
<td>JEREMY TILL</td>
<td>[02:04/34:41]</td>
<td></td>
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<tr>
<td>CHRISTOPHER ALEXANDER</td>
<td>[4:00/34:41]</td>
<td>My opinion is that this probably would not be a good thing. I think that it’s best there are schools, but only if they can radically change. I mean, they’ve really… it’s been a hell of a mess… it’s really an educational experiment filled with […] of […]ish and torturing the populus.</td>
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<tr>
<td>PETER BUCHANAN</td>
<td>[02:32/34:41]</td>
<td>There are large realities of practice and also emerging environmental crises we face, simply don’t penetrate the world of theory because no matter how the world has moved on, theory has not. I’m not against theory, but it needs to be pertinent, useful to the designer at the computer, and deal with the urgent realities of our time such as the quest for sustainability. Many architects hail sustainability as [...] from the [...]alities of form and theory. It was a revival of the modern ideals, a return to objective challenges and this is largely how it has been approached by both in practice and academes. As an ecological and technical issue, to be solved by science and technology, but this approach for sustainability is not enough for learn because it needs to address the cultural and psychological dimensions of sustainability. There needs to be (important for architecture) an inspiring vision of life, lived in deep connection with</td>
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nature, self, community and so on, because it’s from this bigger vision that we come both excitement and psychic energy to provoke the changes we have to go through and give us the energy to see these through. So, why better off without schools of architecture? I won’t elaborate the usual litany that graduates know nothing about construction, the cost, running with jobs, and so on. It happens to be true but I agree with academics that much of it is readily picked up in an office. However, I think that the poor grounding in structure, services, construction, is much more serious. Because these inform design from the very first sketches. And any good architect keeps shuttling between the general and the particular as you see is designing. The particular being both: detail and the shaping of components. Academics assert that to train for practice is to preserve the status quo, rather than to prepare for an unknown future. Yet, I would argue it is academy that preserve an obsolete status quo, while practice, because it engages with ever-changing realities has moved on immensely. Architectural schools are thus not only very faint to prepare students for a very changed profession, which is what is leading to its plummeting status (that of the architect) but I see architectural schools as a drag-anchor on the development of architecture slowing it down. Worse than this when the world faces the many fast environmental crises, when the environmental design profession should be playing a leading creative role in solving this crisis, they are largely mad in irrelevance and frivolity, and this is why I thing that architecture would much be better off without architectural schools.

PETER COOK
[06:40/34:41] – opposition

I think these terrible theory winkers are disaster: probably the real reason why we are having this debate at all. I think that had not been so much abstract theory around architectural schools this would be a nonsensical debate and would be no question that the architectural school is a useful instrument. For me, architecture is the centre, creativity is the means, and the person is the essential. The culture of architecture is why I joined the business – the notion of creativity is the key to it and surely it is the person’s ability to help this planet survive that is essential [!]. In my view, a school is about the evolution of the individual – not the evolution of the institution. If creativity is based in survival – but also in manipulation – the ability for people to discover somewhere where they can be useful… But also ‘play’ – do not dismiss ‘play’! The English and the Japanese are two countries where ‘play’ is an essential part of what makes their culture special. The person with their relationship to society – but in particular to the other people who they come across…
And therefore the business of self-realization, it’s not just an egocentric issue [08:21] – it’s a question of communication. I think that in course of the score in the other … One comes under the influence and it is this business of coercing the ways in which one comes under influence, which is intriguing. In this country, I am not a good historian but I think, it was some 150 years ago, there were some blokes (at that time they were blokes, I am afraid), some blokes knocking around London who said: ‘Hey, wait a minute, you know, why […] let’s meet in the evening and start talking about architecture and start doing architecture’. And it became the Architectural Association, which turned itself into school, which interestingly is still not part of the university! I think actually that the moment when architecture schools felt it necessary to go to universities and non-universities turned themselves in with probably another bit of the slippery slope. So you get these abstracted characters on one side and the institutionalism of the university and all the browny point thinking, you know, ‘let’s get a PhD and not any form of intelligent life’, which I think is a real bumpet. As architecture moves forward the schools have to move forward. But it is the person that must move the school. The way in which influences affect us. I think that in Europe there has been a wonderful tradition that is threatened, but we should recall, which is [that] the most useful architects (some cases pompous, and local – but in many cases the most useful architects) are automatically drugged in schools. To have [a] professor in your building board is both useful and necessary, and it enables this constant connection with the school. Not professional academics who sit up on a campus, but guys or ladies who are up there building [stuff], and bringing it back into school to turn it over, and back into office, pulling the talent out of the school, back into office and round and round… It’s that it’s not a ‘them and us’ situation, but the evolution of the individual within this, I think it is most important. I have had a personal experience of not only teaching and studying in about six different schools, but of course being a visiting faculty in twenty-thirty more or rest of it. My first school would actually appeal to Robert Adam. It was the last school in the UK, which was forcing you to draw, to put pieces of lead around [p] cones and draw from the reality of the churches, and docent houses… It forced you to draw drawings from Owen Jones […] ornaments of 19th century. You had to do the five orders of architecture by proportion and then colour them in nine shades of paints grey. I am not sure if this is good sideways but I am amused that this week it will be this whole debate, in which sustainability is ‘the thing’ we must do, just as a generation before me believed that
play glass was the thing that we would do, or my teachers’ belief that Le Corbusier on legs was ‘the thing’ that we must do. And as certain people, at the other end of the Bloomsbury axis, believe that if you make it parametric enough, it is the thing that you must do. I was never a practicing Marxist, Corbusien, on-legs, off-legs, and I am too old to be parametric. I treat them all with a pinch of salt. I think you have to get out there and be useful – whether it’s in your own back garden, or finding a way that you can contribute. And I think offices – if we de-inst [...] de-invent the architectural school, what we have? We have people in [...] we have people brown-nosing in offices, we have people politicking around, or looking for a label. I think that if we re-invented the architectural school by all means… let’s invent another kind of architectural school, it can be on a raft, in a ship, it can be people all wearing red hats, it can be (you know) south of the equator, north of the equator but this curious relationship between the institution and the way in which you can be inspired is very critical. I have had more inspiration from people in schools, but they were interesting people [!], it happened to be – shall we dare say – using the school. School is where you can expose the passion of partisanship and involvement. The outside world is where you keep your head down. [13:36]

AUDIENCE 1
[15:00/34:41]
(participant among the audience presented himself as from the AA)

The problem is not should we or shouldn’t we have schools of architecture, but we should have fabulous and inspirational schools of architecture. The AA goes through periods of being better or worse, but it sets itself only that mission (!). I was lucky I went to a school where there were lots of inspirational teachers. That’s what we need, and I think the profession – both teaching (…)profession?) and the formal profession – has a problem of getting people into schools that are inspirational and getting people out of schools who are just there because they can’t be inspirational (!) [Audience applause].

AUDIENCE 2
[15:30/34:41]

I think that the best teachers are those who have their own practice (!).

AUDIENCE 3
[15:41/34:41]

Beneath the school to be a sort of being a laboratory of education where the student is rounded and basic skills.

AUDIENCE 4
[15:46/34:41]

I don’t like sustainability being put between the two arguments because I think that sustainability can exist both before architects (as we learn from the vernacular) and I think it can exist a way to move thing[s] forward and to reinvent education in a way that can solve issues of climate change – So, I’d say that I’m sitting between
the two arguments and thinking that we still need schools, but we need different schools and perhaps some schools could learn from looking at other schools are solving the problems a little bit more successfully.

**AUDIENCE 5**  
[16:28/34:41]

It is not that we only teach or learn how to design buildings in schools of architecture. We teach many aspects of life in schools of architecture. We teach the social part of architecture. Architecture is a very broad term (for me). It is not only design of one individual building. It is a way of life, a way of living that we teach in schools. So, I think life would not be better without schools of architecture.

**AUDIENCE 6**  
[17:56/34:41]

I would be in favour of proposition if I could see practice stepping up and creating the environment they so much believe [that] schools don’t provide. The day that architecture firms look beyond the realities that they live, survival, billing hour, commissions, chasing everything … They don’t have the luxury, the infrastructure to provide education during the formative years of young minds. Firms cannot do this[!] They can’t spend the time to reflect, develop new knowledge, connect past with future…?

**ROBERT ADAM - Conclusion**  
[19:50/34:41]

I am not going to say anything about the 19th century, the 18th century, or even the early 20th century. What I am going to talk is what we are talking about is modern architecture, practice and education, and how practice is served by education. I find myself in a peculiar position – I apologize to practitioners for this, who may object to the kind of thing that I do, but I find myself as the only major full-time practitioner amongst opposers and opposers. So, I am afraid I have to speak for practitioners everywhere. Who do I employ? I employ 90 people. I have to keep 90 people fed – this isn’t entirely accidental, I assure you. As it happens, these aren’t all architects, as I find non-architects (far?) more valuable than architects in many respects. As of [the] student who asked it whether it’s worth it: well, maybe, maybe not. I also employ a large number of Eastern Europeans, not because they are cheap and available but because they are actually doing a very good job. I interview students, who are nice people, I employ them, they are intelligent people, I have a great deal of time for them, but they have been developed to have had their aspirations beyond their employability. In fact they don’t know a sentence has a verb, they can’t manage themselves out of a paper bag, and no one of them know what a DPEC is, and certainly the idea that they actually spent a certain amount of time at my expense, which I have to earn, it seems to be completely beyond their comprehension. They are all nice people for all that[!].
I believe design is of the utmost importance. I believe, inquiry design is of the utmost importance, but design is only (in architecture particularly), is only as good as the ability to realize it. A radical concept, poorly executed or failed, actually damages the radical idea that it promotes. You know, I am afraid that crap sculpture undermines sculpture, and a crap radical building just discredits radical buildings. I employ a lot of technologists – as they are called now – and they actually do a lot of what assisting architects used to do. And they actually do know what the DEPC is and actually know how your [...] seven minutes quite useful. So, it’s been boring, you know [...] [...] So, there is [sic] other things: interior decorators designers’ association in 1966 is now BIDA. Really critically actually, that really critical [...] is the association of project managers and [...]. Now, what happened with project managers is really interesting [...] but this is now dominated by project managers [...] I have here someone’s organogram, that was a typical organogram, architect is now down with CDM coordinator and main contractor. The person who was with the architect is the project manager – what a surprise! It’s very simple: architects have ceased to learn how to do these things, they have ceased to learn how to manage, run businesses, the site… It doesn’t go away – someone else does the vacuum [!]. Thinking for progress: what we are doing, what is research, what is all this process. Interestingly, if you go out, there’s industrial world, of proper research (world that does real stuff, which changes the world). And here I quote David Acheson – he is the director of history of science technology and medicine – ‘most invention is taking place in the world of use, including many radical inventions, and furthermore has [...] control of place in the world of use, including many radical inventions, and furthermore has [...] control of users. So, there’s actually false model. It’s actually, basically wrong.

The academic has no test of how well students have done, they don’t succeed in that way, they succeed by impressing other academics in universities – that’s how you do a career path, how you are improving in universities by being as arcane and obscure as possible[!] – that’s very impressive [!]. Schools really, need to go in order to be re-made again, because I think they have failed, they betrayed architecture.

We’ve had several rubbishing of large buildings in Oxford and elsewhere. I can actually guarantee you that these were designed by people who were of schools of architecture – I’m sorry [!] The idea is somehow that there’s a strange breed of people designing shopping
malls who aren’t architects. I’ve worked with shopping design architects, they are all architects—believe me! We’ve had forty years of this kind of education so I am sorry, that crap is being built by architects—don’t just run away from it! That is the product of a deskill, poor quality education system, that lets all these people down but also lets architecture down. And by doing that, they finally reduced it, reduced themselves to ‘styleteers’ with big ideas.

This all debate is predicated on a 1958 conference, and this is a quote from a RIBA ad hoc committee on education of that year, with which I thoroughly agree: ‘we need to legislate firmly for a few vital things they are not naturally inclined to—not for what is second nature to them (second nature being design), and is a legislating we have to forget both a few great innovators who can flood normal disciplines and those who bring natural valuable talents to the job, cause they can be safely left to look after themselves. And it would only lead us into trouble if we imagined that the majority either are or could be like them. Thank you very much.

JEREMY TILL - Conclusion [27:17/34:41]

There’s a strong argument, a sort of intuition, hovering around that in some way the decline of the profession is down to the schools alone. False logic here, because schools are validated by the profession, therefore the profession isn’t validating its own decline. The decline of the profession is very much to do not with the decline of schools, but to very lack of ability of the profession to look outside its own boundaries. When did the early education actually treat to teach the virtues of business and the virtues of the project management? — Never! So those are some of the points that came up.

There was a question from a student about whether part II is worth its money. I would say probably isn’t. - I think education is too long, and I think it should be changed to make it shorter. But in terms of is it directly worth it in terms of money, I’d have to say ‘no, it isn’t’. But is education simply about training in an instrumental way to be directly useful to meet the needs of practice? The answer has to be ‘no’. What education does, is a place where gives you the opportunity to ask questions. As practice is in a state of decline, you actually need a space to drawback in order to be able to criticize it, and think about it, and speculate about what new futures of practice are.

If simply you are bound up within the instrumental demands of practice, then I would say, yes, schools should be shut down. We should go over into some kind of faithful pupillage.
But if schools are going to be somewhere which would allow to think and criticize outside the instrumental demands of the market place, then they have a valid and important role to play. Education in this sense is about education in a much wider sense. We are not educating for a fixed target. We are in a much more fluent environment at the moment. We are aiming at moving targets. DPC is a very-very valid within a backstreet in Oxford. They are not that valid within a play-not plays in war. And therefore we’re actually having to train and educate people for a much more diverse set of practices than the parodies which have been given to us. However [I] think the main thing which is difficult about the proposed as argument is that there is absolutely no sensible alternative proposed. There is a sort of vague sense that what is being proposed is something to do with the University of life. That we will, in some way, learn from the University of life. Well, the most known graduate of the University of life is John Major and I think that says quite enough about the virtues of the University of life. But if we don’t have schools what do we have? Do we return to some form of pupillage? And if you look at, […] if you go back to Dickens you have a brilliant parody of what an apprenticeship is really like. And if you look at someone at the same time he says: ‘I expected to find a tutor, I found only an employer. I found in short that I have paid my premium for the opportunity of self-instruction for the advantage of the run (?) of the office, for the privilege of serving my master, picking up such information as my lie my way’. Our practices, are really in a fit position to offer education? I’d argue very strongly that they are not. They are so tied up (necessarily indeed) within the demands of market place that they do not have the opportunity to offer any sense of education, which is a formation of a set of critical judgments, an education as a place to ask questions, an education as a place to think responsibly about future alternatives for society. You’ll be actually bound down to the instrumental and very expedient serving of the client and nothing more [!] Thank you.
Ο ποιητής τυχαίνει να εμπνέεται μαζί, αράδ', αράδα, και κατά τις ώρες του κι από τη ζωή τη μοναχική μέσα του. Τα τριγύρω του τόνε χτυπάνε κατάκαρδα σα να είτανε δικά του. τα δικά του τα ζη και τα θεριέθει από τα τριγύρω του. O ποιητής είναι, κατά τα περιστατικά της ζωής του, και λάλημα και αντίλαλος. Η Πολιτεία και η Μοναξία πότε του είναι Λάμες, πότε του γίνονται Μούσες. Δεν είναι στο χέρι του να διαλέγει τα τραγούδια του. Το μοιρόγραφτο, σε μεγάλη δόση, κυβερνά το τραγούδι του. Ο λόγος του ποιητή το σάλπισμα είναι, σαν από στόμα αρχαγγελικό, απάνω στα σκιά της Πολιτείας ή απάνω στα σκιά της Πολιτείας. Ο λόγος του ποιητή από την άλλη του την όψη της μονάδος είναι ο ψηθυμισμένος μέσα στη Μοναξία, κάτι συχνά πυκνά απαίριστο και αντικοινωνικό που στέκεται αντίμαχο αντίμαχο στη μοναξία. Μα ο ποιητής, για να δουλέψει ότι το τραγούδι του την ιδέα της Πολιτείας, της μάνας του, χρειάζεται τη Μοναξία. Και για να χαιρετεί τα ονειρόθρεφτα παιδιά που του γεννά η Μοναξία η γυναίκα του, έχει την ανάγκη της Πολιτείας.