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The Profession and Discipline of Architecture: Practice and Education

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Academic disciplines may be charged with irrelevance, as occupying "ivory towers." Then again, these disciplines may project themselves into worldly affairs, courting criticism either for their inconsequence or for the corruption of their ideals. In the academy today, one encounters a mistrust of disciplinarity as laying false claims to authority. There is also often a curious absence of the notion of "profession"—perhaps because both critics and supporters emphasize academic disciplines rather than those disciplines, such as medicine and law, that are recognized to prepare professionals. Disciplines merit critical examination, but I conceive the discipline of architecture as providing an open and liberating environment. This chapter looks at architecture but may also be considered as an exploration of how a "discipline" may be articulated when it is part of a field that also incorporates a "profession."

In recognizing both the profession and the discipline of architecture, I do not intend an invidious distinction but rather intend simply to acknowledge different responsibilities and practices in these two modes of attention to a field. To launch this consideration of the profession and the discipline of architecture, I find it necessary to consider these distinctions in the context of architectural education.

Recognition as a school of architecture is to be a *professional* school of architecture. In many countries, schools hold this status by a license from the state; in the United States, schools are accredited by an organization, the National Architectural Accrediting Board, which is partially

controlled by the national professional organization, the American Institute of Architects. Recognition as a professional school implies an important responsibility to society—preparing people to enter the practice of architecture. To this end, we have professional degree programs (indeed, it is the degree program, not the school, that is accredited). In most if not all instances, our schools of architecture conceive of this professional degree program as the centerpiece of the school; I imagine few have any quarrel with that focus. Increasingly, however, our schools of architecture incorporate other degree programs: advanced research degrees, including doctoral degrees. What new relations are then established between architecture and education, and among degree programs?

To explore these issues, I distinguish between the profession of architecture and the discipline of architecture. We might imagine a diagram in which the profession of architecture extends horizontally and is intersected, vertically, by the discipline of architecture. Thus the two realms of activity intersect; they are partially but not wholly coincident.

The profession is centrally concerned with the current structure of practice in order that it may fulfill commissions to the highest standards. Its concerns are mainly synchronic and synthetic. Admittedly, the profession does have a temporal dimension that possesses both invention and memory, but these are synchronically structured. That is to say, within the profession, memory and tradition survive operationally (currently, for example, modern architecture and critical debate about it). Other aspects of the tradition survive in the discipline but are not professionally operative (the guild systems of medieval builders, for example, and even their architectural forms and technologies).[1] The profession is also inherently projective—it brings something into being. Yet it cannot be so exploratory that its projections are outside the resources and time scale of its client needs. On the other hand, numerous conditions or activities that are necessary to a successful practice, and thus deserving of attention within the profession (examples might be public relations, office management, and the state of the economy), are rarely central to the conception and understanding of architecture in a stricter sense. Thus, from the point of view of the profession, we see an appropriate inclusion of concerns that are not intrinsically those of architecture while certain forms of architectural knowledge are strategically excluded.

We may also look at this situation from the vantage point of the discipline of architecture. By the "discipline of architecture" I mean a collective body of knowledge that is unique to architecture and, though it grows over time, is not delimited in time or space. Trabeated (post and beam) systems and wall and vault construction appeared early in the history of architecture and are still studied in purely technical terms; even when viewed purely technically, such systems are necessary to architecture. When, however, these systems are understood to create opportunities and constraints for the definition of space, the control of circulation, and the play of light, these are issues of the discipline of architecture. To distinguish the surface of a wall from the wall itself and to find in this distinction the opportunity for representation are propositions within the discipline of architecture.

The nature of a "proposition within the discipline of architecture" may be clarified through a short exposition of Le Corbusier's "Five Points" (1946, 1:128–29). With the development of reinforced concrete, the rigidity and many of the technical limits of trabeated structures were swept away. The possible span of a beam relative to its support increased greatly. Cantilevers could be much more extensive and, thanks to the continuity of the reinforcing rods, could diminish the forces in a neighboring bay of the structure. These traits were recognized in the technical development of architecture, in the engineering aspect of architecture. Le Corbusier, however, developed a series of related "points" for architecture that were made possible by this new technology. As shown in his diagram of the Five Points (see Figure 14.1) and in an exemplary work based on those principles (see Figures 14.2 and 14.3), Le Corbusier asserted that (1) the building could be carried on a sparse array of columns *(pilotis)* and could thus leave the ground plane open; (2) the closure between inside and outside and from room to room (or better, now, space to space) could be independent of the structure, thus allowing a "free plan" relative to the structure and, independently, from floor to floor; (3) and (4) the independence of the exterior surface from supporting structure allowed a free development of the facade, which Le Corbusier showed in the relatively constrained version of the long horizontal (what we call "strip") window; and (5) the flat roof slab permitted a roof garden. Even individually, but especially collectively, these points recognized new, inherently architectural potentials beyond the strict technical

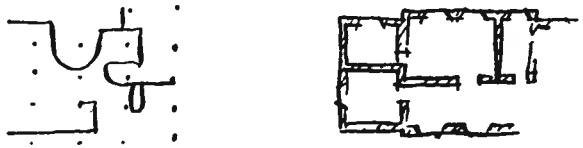
capacity of a new structural medium. The Five Points offer an example of the growth of architectural knowledge: new architectural opportunities, made possible by a new technology but nonetheless intrinsically architectural. Le Corbusier wrongly propagandized his invention as one possessed of a temporal necessity, but his forceful invention did require that henceforth architects had to choose to work with these principles or not. Le Corbusier here made a contribution to architectural practice, but more fundamentally to the discipline of architecture.[2]

The structure of knowledge within the discipline is such as to preserve the memory, indeed to continue to study, of that which is external to the range of current practice. Similarly, from a disciplinary base, one can make speculative projections about what might be, unconstrained by the need for a synthesis within the time frame of a client. Historically, we may see this in Piranesi's *Carceri,* Ledoux's "revolutionary" projects, Frank Lloyd Wright's "Broadacre City," and Constant's visions of "New Babylon." Today we see it in visions of the environment of our prophesied cybernetic future. These last comments point to a distinction in the products of the profession and the discipline. The physical artifact, typically a building, as the product of the profession absolutely requires a synthesis whether well or badly performed; the products of the discipline take many forms and possess their own integrity but emphasize a given aspect of architecture, establishing resources for an architectural synthesis rather than taking that step.

If we now turn back to schools and degree programs, I think the implications of my line of argument are clear. The professional degree programs have come into being, and assume their form and responsibilities, in relation to the profession. The discipline of architecture, including its transcultural aspects and its anachronisms and speculations, is primarily the domain of the research degree programs. The less-than-full congruence of the domain of the profession and that of the discipline entails the presence, within a school of architecture, of persons, types of inquiry, and subjects that do not always address one another directly — indeed, they may quite properly, within the current time frame, be irrelevant to one another. Beyond the condition of current utility, the range and structure of the discipline deserve to be explored in their own right, but also because what appears irrelevant today may yet prove otherwise.

Jusqu'au béton armé et au fer, pour bâtir une maison de pierre, on creusait de larges rigoles dans la terre et l'on allait chercher le bon sol pour établir la fondation.

On constituait ainsi les caves, locaux médiocres, humides généralement.



Puis on montait les murs de pierre. On établissait un premier plancher posé sur les murs, puis un second, un troisième: on ouvrait des fenêtres.

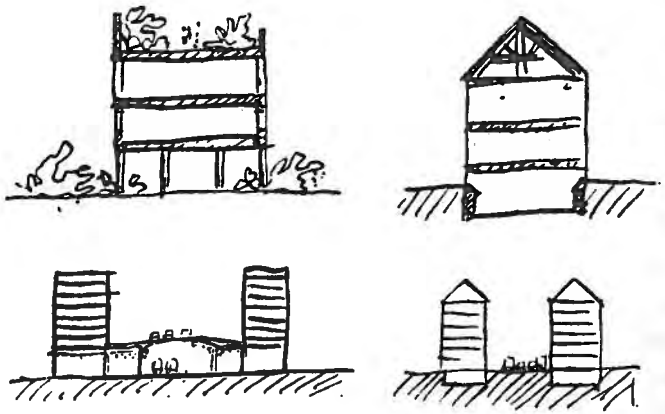


Figure 14.1a. Le Corbusier, diagram of "The Five Points," from *Le Corbusier et Pierre Jeanneret: Oeuvre complète de 1910–1929,* 4th ed. (Zurich: Erlenbach, 1946), 129. Copyright 2000 Artists Rights Society (ARS), New York/ADAGP, Paris/FLC.

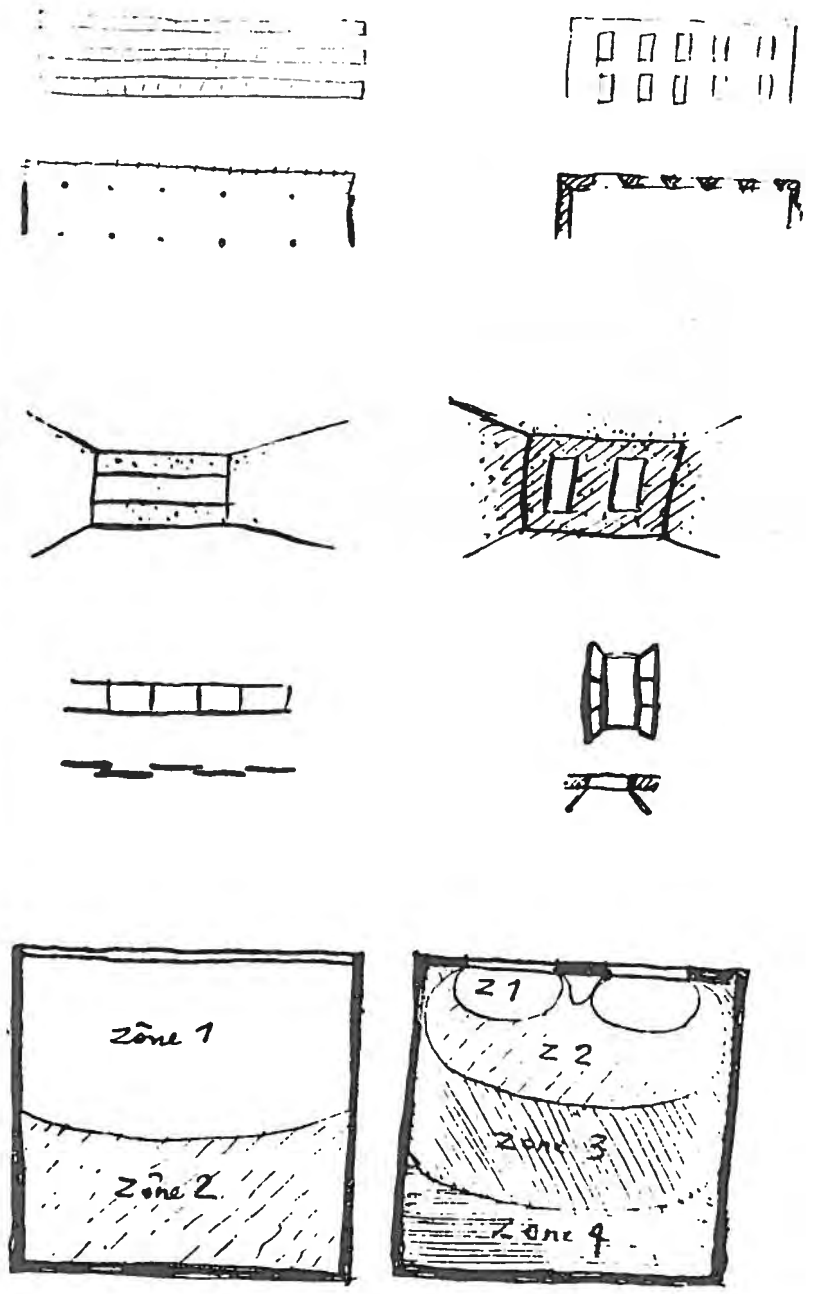


Figure 14.1b

Figure 14.2. Le Corbusier, Villa Savoye, Poissy, France. Exterior view. Courtesy of the Rotch Library Visual Collections, Massachusetts Institute of Technology.

Of course, it would be a pity if these two enterprises did not recognize their significant relations as well. The diagram I evoked at the outset included an intersection of the profession and the discipline. Within this intersection important transactions are initiated from both sides. Le Corbusier was a passionate practitioner, yet he is so frequently cited because both his ideas and his works contributed to the growth of the discipline. Both Viollet-le-Duc (Viollet-le-Duc [1854–1868] 1979, 1987; Summerson [1949] 1963; Hearn 1990) and Gottfried Semper (Semper [1851] 1989, [1860–1863] 1977; Herrmann 1984) are remembered primarily for their theoretical contributions within the discipline of architecture, yet numerous architectural works could not have taken the form they did without such theories. The intersection of the profession and the discipline deserves careful attention. Indeed, precisely this aspect of the profession must be emphasized in schools, while other aspects of a student's professional development await immersion in the architectural office. From this intersection, the professional-degree student ventures into the more esoteric aspects of the discipline, both for an understanding of its past and to revel in imagining a practice that does not yet exist. Put somewhat differently, the intersection of the profession and the

Figure 14.3. Le Corbusier, Villa Savoye. View from terrace to salon. From Collection Lucien Hervé from T. Benton, *The Villas of Le Corbusier, 1920–1930* (New Haven: Yale University Press, 1987), 207. Copyright 2000 Artists Rights Society (ARS), New York/ADAGP, Paris/FLC.

discipline, whether in schools or more generally, should not be emphasized to the extent of, on the one hand, undermining the synthetic activities of the profession that must reach outside the discipline, or, on the other, honoring the discipline only if it is of immediate or proximate utility.

We want the discipline to grow and become more articulate. We want professional practice to reach its highest standards. As researchers or professionals, we want to make our own contributions to these enterprises. As educators we want to prepare the next generation to make their contributions in each of these areas. Degree programs exist only to serve these ends; to maintain the fruitful distinction between professional and research degrees is fundamental.

This last statement is under challenge. In February 1996 the European Association of Architectural Educators held a meeting at the Technical University in Delft on the topic "Doctorates in Design + Architecture." The impetus for the meeting was pressure within the European Community nations to move toward an architectural professional degree termed a doctorate. An as yet small but increasingly vocal number

of advocates for the same policy exists in the United States. As a matter solely of terminological change, this would be merely an unfortunate example of degree inflation. But at least in some quarters in Europe, the change in title is accompanied by a change in the agenda of professional architectural education — moving it into the realm of a research degree. At first glance, a higher degree title may appear to be a positive step toward a more rigorous architectural education and in step with changes in architectural production. However, to date, professional education in architecture has been a course of long duration that, nevertheless, few would argue overqualifies its graduates. Put more positively, architecture students begin with little specialized preparation from secondary or undergraduate education and, encountering a rather complex, certainly broad, field, need the current extended-degree programs to emerge as promising architects. It seems implausible either that all of these students want or need an additional research component or that even the best of them would excel on two fronts simultaneously. Actually, the matter is more complex than this, and I have overstated my case. In my own school, professional students are increasingly introduced to research techniques; professional and research degree students in architecture and other fields share in studios and workshops; and some professional students participate in faculty research projects. Professional students do increasingly engage research agendas, but we would not think to demand an independent advanced (let alone doctoral) research thesis at the same time that a student is culminating a professional education. If terming a professional degree (in the United States, historically a bachelor of architecture and for some decades increasingly known as a master of architecture; in Europe often known simply as a "diploma") a doctorate is not just a misnomer, it both endangers the professional degree agenda and devalues the traditional doctoral degree. Such a move would, under its most positive construction, insist on a highly developed thesis in the intersection of the profession and the discipline of architecture. This demand seems too much to ask too early of these students. Furthermore, the new demand would be made in a context where professional and disciplinary studies are diffused into one another at an early stage of education, potentially weakening these two domains within which the intersection is recognized.

Before concluding, I would like to open some areas of discussion that assume the continuing presence of distinct professional and research degree programs.

The Distinctiveness of the Discipline of Architecture; or, Limits to Inclusiveness of the Discipline of Architecture; or, Architecture Schools Should Be Schools of Architecture

A school of architecture that incorporates a research component should recognize that both the profession and the discipline of architecture possess a degree of autonomy. Even though architecture stands in significant relationship to many other areas of knowledge, and even though schools of architecture include faculty with expertise in other areas of knowledge (typically artists, engineers, historians, and social scientists), architecture does not reduce to some composite of those other areas. We need, for example, structural engineers who are fully competent technically, but within a school of architecture we can expect that researchers, and the people who are the recipients of research degrees in architecture, should conceive and interpret that technique more broadly, as it is integrated to the (evolving) discipline and profession of architecture. I seek to sustain this view from a respect for the field of architecture as distinct from other activities; schools of architecture have a responsibility to sustain and advance this distinction. It is a criterion that, under a condition of limited resources, might serve to limit and direct the types of inquiry to be included within schools of architecture and their degree programs. If the research is solely technical or, to take another example, is a general historical inquiry, or is otherwise disengaged from the profession or the discipline of architecture, does it have priority in this place?

Recognizing and Stimulating the Contributions of the Profession to the Discipline (and Vice Versa)

The profession of architecture and the professional degree programs should be concerned to contribute to the discipline of architecture. In teaching, perhaps even more than in practice, designers should be chosen for their ability to entertain and advance the more general level of

discourse about architecture that contributes simultaneously to the profession and the discipline. This capacity of design professionals should be respected and encouraged. When possible it should also be incorporated into the research degree programs.

In terms of background, orientation, and time, however, it may well be exceptional that design professors can also conduct or direct research in a form that is appropriate for the Ph.D. degree. Perhaps advanced disciplinary research is the realm for a professional doctoral degree in architecture, though I am skeptical. I think, rather, that the exploration of this intersection of the profession and the discipline can continue in two familiar ways: (1) through projective formulations of designers presented in essays, diagrams, models, and architectural works, as well as through the less formalized demands of the professional and advanced masters degrees; and (2) through the advanced research conducted by those who have completed both professional architectural degrees and traditional doctorates in correlated fields (e.g., engineering, history, social sciences). Such double graduate education is demanding, yet increasingly common among well-qualified candidates.

Relative to the modes of research just mentioned in the realm of architectural designers, a rarer mode for such contributions would be the development, from a disciplinary base, of true architectural research on the intersection of the discipline with practice. Such research would include analysis of the nature of current practice, seen from the more general disciplinary view. It would also include the speculative projection of either new or neglected architectural knowledge into current practice.

I have sought to articulate a range of research and teaching activities that should be complementary to one another while providing for the growth of the discipline and the enhancement of the profession. Such activities have long existed; that is why we already have the profession and the discipline of architecture. The promise of advanced academic research is both to accelerate and deepen these inquiries and the related projections. Intrinsically, I don't see any great problem in encouraging this work within our research universities (or other private or governmental research institutes). But I don't wish to end without recognizing two practical problems.

The first is the question of the willingness of the research institutions to fund research that maintains a commitment to the discipline

of architecture — as contrasted to research in technical matters that support, surround, or intersect architecture. Even funding for significant technical areas such as energy, sustainability, and air quality is scarce; intrinsically architectural research is typically deemed too esoteric for funding. Yet the discipline of architecture does intersect with the professional, and together they shape our physical environment, which is too often rightly subject to both aesthetic and environmental criticism. We need a more open view of how disciplinary research can contribute to improving our knowledge and our environment.

My second problem is more serious than that of funding; within the field of architecture itself, it sets limits to the development and effectiveness of research (and thus also contributes to the funding problem). If we are to have a larger number of advanced research people in architecture, more outlets must exist than just additional teaching positions. Is the profession prepared to support research in those vital areas where it intersects with the discipline of architecture, or even in the more rarefied aspects of the discipline, and thus to receive advanced research into its practice?

I conclude with some observations about my understanding of a "discipline" in contrast to other usages in this book and elsewhere. In the conference that launched this book, Julia Robinson began her précis with the following sentence: "The field of architecture is in the process of evolving from what has been a practice, informed by other disciplines, into a discipline with its own body of knowledge." And later: "This paper will explore the history of the field and the seeds that have been laid for creating a discipline out of the practice of architecture." For me, these statements too little recognize the body of knowledge that has long since built up within the discipline of architecture. They appear also to minimize what I think must remain an important distinction: architectural knowledge versus knowledge (of other kinds) applied to architecture. Robinson raised this matter as a question: "Are there 'architectural' questions, or are there simply a variety of questions that can be asked of architecture?"[3] I say there are both (consider again the Le Corbusier example offered earlier); both are important, and it is important not to take one for the other.

Whatever our differences, both Julia Robinson and I have used the term "discipline" in a positive sense. We both see the discipline as a key

vehicle in the production of knowledge and the advancement of the field. At least in my case, I see the discipline as an open and liberating environment: the place where what appears anachronistic or visionary, currently inappropriate or unrealizable, can be thought, preserved, advocated. I see the discipline as that which fosters participation in the field by nonprofessionals: preservationists, local historians, visionary engineers, builders, advocacy groups, and citizens, to name a few. This view stands in contrast to the not uncommon suspicion of "disciplines." Of course, many such doubts or questions are legitimate and must also be applied to the construct I have called a discipline. The question remains for me: Is some of the difference from my construction to those who are more skeptical about disciplines owing to the absence of the concept of "profession" and the encouragement of a broader framing discourse that it entails?

Notes

This chapter derived from the author's contribution to the University of Michigan symposium on Ph.D. Education in Architecture, 11–12 November 1988.

1. This is not to say that the profession does not leap back over time to embrace once again aspects of the architectural tradition that had become dormant. Classical revivals have been several in the history of architecture. The Bauhaus, famed for its role in the development of modern architecture, began with a favorable reassessment of the practices of medieval guilds. Indeed, as I will argue, the discipline of architecture maintains a record and an awareness of the architectural tradition that is then used selectively—by imitation, but also critically and inventively—in the profession.

2. I would like at least to note the challenge as to the ontological status of the work of the architect as opposed to that of the contributors to the discipline (even if architects working in a different mode). Yes, a building should keep rain off our heads whereas a theory does not. Since the Renaissance the product of the architect has increasingly been the documents by which a building is constructed rather than the building itself; however, I do not choose here to emphasize this convergence of architectural with other forms of intellectual work. Rather, I prefer to emphasize that buildings, like sculptures, paintings, diagrams, and texts, are objective documents of human thought even if they must also be differentiated in many ways. New architectural conceptions may first appear in a built work. Certainly in examining prehistoric and ancient architecture we develop our disciplinary knowledge from the works themselves (with, in a few cases, some limited support of drawings or texts). While there is something that we can term *synthesis* in every form of production, I particularly emphasize synthesis in the architect's professional work because a building will at least imply answers to numerous issues that may deliberately and correctly be omitted from theoretical or historical discourse about buildings.

3. These quotes by Robinson were taken from a lecture presented at the conference "Knowledges: Production, Distribution, Revision." For conference details, see note 1 in the introduction.