

Shifting the Discipline of Architecture: Transformations in Architectural Education and Pedagogy

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Architectural education as we know it today began to take shape during the Enlightenment codification of societal power relations in the late eighteenth century. This relationship is expressed in Claude Nicholas Ledoux's engraving of the auditorium of the Theater of Besançon reflected in the eye of the architect. This image constructs a "reciprocal relationship" between authority and society through a social contract in which authority is given over to leaders who, in turn, are responsible for reflecting society's will. The boundaries of contemporary architectural education exist within the limits of these reciprocally constructed cones of vision.

Although an acknowledgment of the complex, global, and competitive qualities of architectural practice is often behind recent calls for the "professionalization" of education, these calls rarely consider how major shifts in the boundaries of architecture might require a radical rethinking of the structure of architectural education. Architecture schools must confront the challenges of this new environment through a willingness to both educate students who may not continue on to receive a professional degree and to expand professional education to include practices once deemed outside the boundaries of architecture. This paper will offer a proposal for such a restructuring.

INTRODUCTION

The stakes in the border war have been the territories of production, reproduction, and imagination. This chapter is an argument for *pleasure* in the confusion of boundaries and for *responsibility* in their construction.¹

— Donna Haraway
Simians, Cyborgs, and Women

Architectural education as we know it today began to take shape during the period of the Enlightenment codification of societal power relations in the late eighteenth century. This relationship is expressed in Claude Nicholas Ledoux's engraving of the auditorium of the Theater of Besançon reflected in the eye of the architect. Ledoux's image constructs a "reciprocal relationship" between authority and society through a social contract in which authority is given over to leaders who, in turn, are responsible for reflecting society's will.² Our traditional models of architectural practice exist in the space defined by this gaze, implying not only that the architect is capable of knowing the will of society and through the vehicle of architecture responding to it, but also that what constitutes an appropriate response is carefully circumscribed. Similarly, the boundaries of architectural education exist within the limits of these reciprocally constructed cones of vision. They are codified in the legal control of the title "architect," the desire to bring all schools under a single accreditation system, and the devaluation of the license to practice architecture to an increasingly mechanized ex-

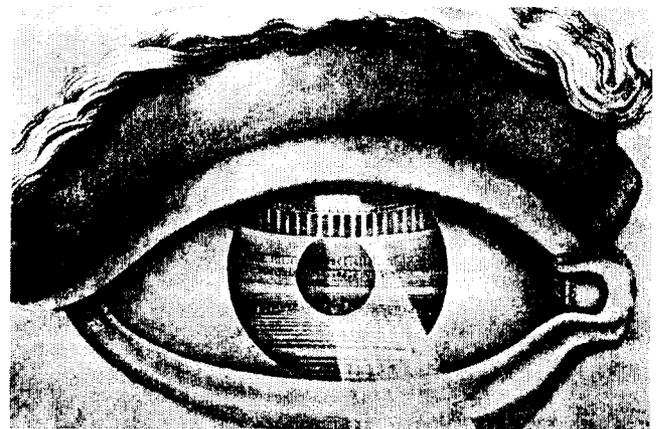


Fig. 1. C-N Ledoux, *L'Architecture considérée sous le rapport de l'art des moeurs et de la législation* (Paris, 1804).

amination of the ability to protect "health, safety, and welfare."

This reflexive perspective is also present in the United States in recent calls to make architectural education more closely mirror architectural practice. Such proposals typically decrease the classroom and studio components of university-based education in favor of an increase in "cooperative" and "practice-studio" education. Under such proposals the educational system built in the nineteenth-century to legitimate architecture as a profession is dismantled in the late-twentieth-century to become more transparent to the profession.³ The acknowledgment of the complex, global, and competitive qualities of architectural practice is most often behind the calls for the renewed "professionalization" of education. Robert Gutman writes: "I see only one solution to these difficulties, and that is to reduce the role of the schools in the educational process and give a more central role to practices."⁴ However, the fragmented global environment, which also includes a growth of possibilities for architectural practice, might require a looser fit between the schools and the profession. This paper will argue for a reformulation of architectural education to construct a more diverse structure for tackling the multiple fields in which and upon which architecture is practiced today.

It is not necessarily clear that the best and brightest students enter or remain in the profession of architecture.⁵ Every year schools of architecture graduate more students than the profession can absorb, despite phenomenal attrition rates within the schools themselves. Architects tend to be proud of their own professional brand of Social Darwinism, a unique blend of self- and natural-selection. According to this myth intense competition keeps standards high. Each year the

dimensions of required knowledge and the responsibility of the architect expand, the demands put upon schools for accreditation become more sophisticated, and the requirements for licensing become more demanding and constrained. While these may be good things in their own right, they ignore another fact: the boundaries of practice are blurring and, therefore, the scope of possibilities for architecture enlarging. I would like to consider what these transformations imply for the structure of architectural education and the content of architectural pedagogy. In my conclusion I will offer a proposal for this restructuring that addresses three issues: first, that there are purposes for receiving an undergraduate education in the discipline of architecture even if this education does not lead to a professional degree; second, that as architectural practice restructures in response to the globalization of the economy new research-based graduate programs should be established; and third, that as the scope of architectural practice expands we should aim for a more diverse assemblage of graduate programs.

DISCIPLINARY BOUNDARIES AND THE GLOBAL ENVIRONMENT OF ARCHITECTURE

The way we think about architecture is always organized by the way we think about boundaries. Traditionally it is a matter of walls dividing inside from outside, public from private, and so on. With modernity there is a displacement of the traditional sense of an inside as an enclosed space established in opposition to the outside. All boundaries are shifting.⁶

The concept of a discipline, or a "field of study" is defined as much by its boundaries, and the rules that regulate those boundaries as by its contents. Specific perspectives order what a discipline contains and how it is delimited.⁷ Numerous authors have chronicled the development of architecture into a distinct profession in the nineteenth century to legitimate and codify a specific set of design practices within industrial societies in Europe and the United States.⁸ Today, a complex relationship among schools, the profession, and various regulatory agencies delineates who may call him or herself an architect and by extension what practices are properly defined as architectural.

As the practice of architecture expanded in the twentieth century efforts to control and organize production became more complex. Modern architectural practice in the United States after World War II was structured by hierarchical control and oversight and was dominated by large firms. While Walter Gropius' conception of practice sought to bring together collaborative teams of diverse individuals under the leadership of the architect, in practice large corporate firms, exemplified by Skidmore, Owings, and Merrill, offered total design services through a hierarchical and highly differentiated office of design professionals.⁹ This multidisciplinary operated serially and tended to reinforce rather than redefine the divisions between design tasks. Firms of this kind were not only capable of carefully controlling their product, they were also able to export this standardized product worldwide.

With the advent and dissemination of information technologies and socioeconomic restructuring in the 1970s and 1980s an environment for interdisciplinary practice begins to take shape. Urban planner Manuel Castells describes this restructured environment as a "space of flows," an organization of informational technologies detached from the "historically constructed space of places."¹⁰ Geographers such as Edward Soja have described the affect of this restructuring on the design of the urban environment.¹¹ But there has also been a significant effect on architectural practice. Among other things these restructurings result in the flexible patterns of work and focus on information gathering and processing¹² that have transformed all scales of architectural practice in the past two decades.¹³

This restructuring does not in and of itself produce interdisciplinary work, although it does make such work more viable. Even large multidisciplinary firms no longer produce projects exclusively within

their own offices. But in addition to the reorganization of practice, new practices have also begun to emerge that do not fall neatly within the traditional boundaries of the profession of architecture. Some of these opportunities include: community development and empowerment, public policy, planning and zoning, ecological concerns and the environment, installation practices, artistic practices, curatorial work, publishing and criticism, and preservation. The greatest opportunity may lie in the electronic/virtual environment with its potential to affect the shape of physical environments, not to mention the design of this environment as a spatial and not just graphic realm. Further, the "space of flows" is an environment that can and should be considered in an enlarged definition of the discipline of architecture. For example, work once considered "alternative" in the "Young Architects" issues of *Progressive Architecture* magazine is now embraced by *Architecture* magazine as redefining the profession. This can be seen in the increasing number of pages that focus on practices concerned with the design of the virtual environment. Architecture firms are involved in advanced rendering and animation, website design and interactive communication, and "space-planning" that resolves the interaction of both physical and virtual space.

The permeability of boundaries caused by new technologies and the global environment undermines clearly circumscribed power and social relationships such as that described by Ledoux's image. Within architecture this allows for a diversification of the profession and the creation of new forms of practice. But as architectural theorist Beatriz Colomina notes: "[t]hroughout this century, this disturbance of boundaries has often been understood as a threat to identity, a loss of self."¹⁴ Although Colomina is speaking of the status of the architectural object, her statement can be extended to architectural practice. By implication, as the boundaries of a discipline become more permeable, the desire of the profession to control them increases. This is clearly happening in the profession's increased self-regulation but is also the case in its increased attempts to regulate the schools.

The writings of feminist authors offer some insight into this process.¹⁵ Donna Haraway writes:

I prefer a network ideological image, suggesting the profusion of spaces and identities and the permeability of boundaries in the personal body and in the body politic. "Networking" is both a feminist practice and a multinational corporate strategy — weaving is for oppositional cyborgs.¹⁶

These "boundary practices" recall the marginal existence common to women, and several authors have noted the similarity between the reactionary response to this expansion and permeability of boundaries as a "fear of the feminine," a condition out of control:

In practice, architects have entered new territories; they are designing film sets, furniture, LP covers; they are retraining as schoolteachers, space-planning advisors, brief writers, community advisers, management contractors and developers; they are writing, drawing, making installations, inventing new tricks, selling themselves, their wares, their images. ...to sell himself in the global marketplace, the "old boy" must be fragmented, moulded and reconstructed as a "new girl."¹⁷

The desire to control the means of architecture's reproduction (the schools) exists in a context where the profession is losing control of the means of production. In this respect the profession is not unlike a "gated community" in which increasingly repressive walls limit who may enter and exit the physical space of the community, but not the information and knowledge that is exchanged through the new gates produced by new technologies. I would like to suggest that to benefit the longevity of the architectural profession we must be willing to push its limits and take the responsibility to educate students who will create practices that do not fall within these boundaries, as blurry as they have become.

NEW CURRICULAR CHALLENGES

Technologies and scientific discourses can be partially understood as formalizations, i.e., as frozen moments, of the fluid social interactions constituting them, but they should also be viewed as instruments for enforcing meanings. The boundary is permeable between tool and myth, instrument and concept, historical systems of social relations and historical anatomies of possible bodies, including objects of knowledge. Indeed, myth and tool mutually constitute each other.¹⁸

A curriculum is a set of courses constituting an area of specialization; the focus is on time, units, skills, data, and sequences organizing a codification of quantifiable knowledge and abilities into a structured chart of relationships. There are other ways of looking at a "curriculum." The word curriculum comes from *currere*, to run. Like a current it is both present time, of the moment, but also a fluid body moving continuously. It is possible to conceive a curriculum in this way, to recognize it as a structure that forms connections within the fluid condition that is our multicentered and fragmented environment. If education can no longer describe a discrete, contained body of knowledge, or offer a unified paradigm in response to a civic or social claim, it may instead be able to offer multiple and flexible trajectories into and through the new practices shaping our physical and virtual environment.

Today, colleges and universities are asked to meet two significant requirements: first, to equip students with critical *knowledge* about power relations and social processes in a period of rapid information exchange and, second, to train graduates for jobs in the global marketplace. Current structures of architectural education do not adequately address these conflicting requirements.¹⁹ We need to create a new nonhomogeneous space for architectural discourse that includes both normative and new practices, mediates between the profession and the schools, and uses this knowledge to inform architectural pedagogy. Recent discussions around the structure of architectural education have been reduced to an accounting of credit hours and the number of years required for a professional degree rather than the changing structure of the educational environment.

Typically discussions of the relationship between the profession and the academy take the form of a jeremiad, a prolonged lamentation or complaint, rather than looking to new and alternative practices, technologies, communities, and environments and how they may be brought into how and what we teach.²⁰ Mired in a series of single-issue debates over the role of liberal arts education, degree designation, the gap between theory and practice, and the split between social and formal concerns in design architectural educators have not seen or engaged the variety of possibilities that surround them. We are losing our ability to act as agents in the formation of architecture. On the other hand, evaluative surveys and studies of the "state of education," such as the recent *Building Community: A New Future for Architecture Education and Practice*, which are typically commissioned by a compendium of institutions, have to answer to too many constituencies to be of any great use.²¹

Numerous schools, ACSA conferences, and AIA committees have taken up the pressing topic of the restructuring of architectural practice within the context of globalization, the shift from hard to soft technologies, flexible economies, and contemporary urban and environmental concerns.²² Although now celebrating new forms of practice, these groups often dismiss the need to consider new forms of practice within the academy and instead call for tightening professional education to close the gap between the schools and the profession.

While this might be a legitimate way to address some of the conditions that maintain the "gap," it does little to address the problems of legitimacy confronting the profession and its educational system. To properly consider the shifting terrain of practice described by many contemporary authors requires a rethinking of architectural education beyond the "gap between education and

practice." While the gap may indeed be very wide, its scope of concern is very narrow. As bell hooks writes:

Postmodern culture with its decentered subject can be the space where ties are severed or it can provide the occasion for new and varied forms of bonding. To some extent, ruptures, surfaces, contextuality, and a host of other happenings create gaps that make space for oppositional practices which no longer require intellectuals to be confined by narrow separate spheres with no meaningful connection to the world of the everyday.²³

In order to acknowledge shifting practices we need to shift the discipline of architecture itself — its formal, conceptual, and skills-based knowledge. We need to educate students not only to accommodate themselves to the vicissitudes ahead but also enable them to become active agents in their own education and career choices. Their education should combine an understanding of physical space with knowledge of the processes that shape this space — allowing them to see these new processes not as negative challenges but as creative possibilities.

CONCLUSION

If architectural practices are indeed becoming more interdisciplinary and if increasing numbers of graduates are shifting into fields not traditionally seen as architectural, what are the possible responses for architectural education? I would like to outline one possible proposal that offers an offensive rather than defensive response to disciplinary change. I propose that we clarify the position of professional education by situating it within graduate programs. This would enable an opening of opportunities within undergraduate programs, which would become strictly "pre-professional." Although at first glance this would appear to constrain the current diversity of programs in the United States and around the world, upon closer inspection it provides a more flexible structure that would resolve a number of the conflicts described above.

First, no longer focused on the singular pursuit of an architectural degree, graduates of undergraduate programs can situate themselves within other practices in order to enlarge the public understanding of the physical environment and the role of architecture in shaping it. This has the potential to enhance the environment in which architecture operates by enlarging the public educated in architecture. Studio should still remain at the core of this education because it is the problem-solving, process-oriented abilities and ways of thinking that can be extended to other disciplines and careers. Pre-professional programs can vary more broadly from school to school in response to the needs of local constituencies. What all such programs would share would be a concentration on the discipline of architecture, a broadened liberal arts core, and an introduction to a broad array of post-graduate possibilities through an interdisciplinary "professional practices" course and a "coop" opportunity for upper-level students. Equipped with a broader range of information about post-graduate opportunities students can take greater responsibility for their education and career choices.

Second, professional graduate programs can become sites of research and global exchange. Students will enter such programs more broadly educated in both the liberal arts and architecture. Standard "professional practice" courses and studio projects could take on the more complex demands of the practice of architecture within a restructured global environment, engaging more diverse programs, constituencies, and sites.

Third, this structure addresses the diversification of graduate programs that is already occurring. Specialized graduate programs in digital design, for instance, are springing up around the United States and Canada. Such programs are better suited to students who want to work in the design of virtual rather than physical space. Other interdisciplinary graduate programs are also possible under such a model. All graduate programs should require extracurricular

practical experience as part of the educational program, carefully tied to the research and professional concerns of each curriculum.

Like the tools and technologies that we use to shape our environment, the curricular structure that we utilize to educate our students is not value-free. This proposal does not resolve all of the difficulties inherent in the restructured global environment of architecture, and there is not space here to go into the detailed reworking of licensing, accreditation, and course content that such a proposal requires. It does suggest, however, that compelling contemporary educational structures to meet the complex demands of today's practices is simultaneously repressive and inadequate. A more radical shift is required.

Finally, an active engagement with new disciplines, technologies, communities, and environments is one route toward the diversification of the profession. Many schools are actively involved in rethinking the history and theory curriculum to take on the questions raised by the global environment of architecture and the diversity of populations for and with whom we build. We have the opportunity and responsibility to respond to and reflect the cultural diversity of the communities we serve, to answer the questions: what is our context, who are our students, what do they want from their education, and what are we educating them for? Each institution will ask these questions differently and build a curriculum around their answers. Even within a global environment, flexible and constantly undergoing restructuring, we are always engaged within a specific context. Education must mirror the flexibility that our multicentered and fragmented environments and professions engender and empower students to work within them.

NOTES

- ¹ Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991) p. 150.
- ² Anthony Vidler writes: "In this striking emblem of theatricalized vision, an eye, as if located on center stage, reflects the seats, themselves signifying society and ranged in tiers to emulate a classical amphitheater; the beam of light that illuminates the stage, emanating from the back of the auditorium, is also reflected in the pupil, but is then projected, like the all-seeing eye of Masonic iconography, from inside the orb itself out towards the spectator." Anthony Vidler, *The Writing of the Walls* (New York: Princeton Architectural Press, 1987) p. 40.
- ³ One of the strongest public attacks on the schools was published in *Progressive Architecture* in 1995. Michael J. Crosbie, "The Schools: How They're Failing the Profession (and What We Can Do About It)," *Progressive Architecture* 126(September 1995): 47-51+. A more reasoned approach is taken by Robert Gutman, "Two Discourses on Architectural Education," *Practices* 3/4(Spring 1995): 11-19. He reiterates his argument for the professional community in Robert Gutman, "Redesigning Architecture Schools," *Architecture* 85(August 1996): 87-89.
- ⁴ Gutman, "Two Discourses," p. 16.
- ⁵ See for example Peter G. Rowe, "Introduction: Architectural Practices in the 1990s," in William S. Saunders, ed. *Reflections on Architectural Practices in the Nineties* (New York: Princeton Architectural Press, 1996), pp. 2-6.
- ⁶ Beatriz Colomina, "Battle Lines: E.1027," in Francesca Hughes, ed. *The Architect: Reconstructing Her Practice* (Cambridge, MA: The MIT Press, 1996), p. 6.
- ⁷ Elizabeth Grosz, *Volatile Bodies: Toward a Corporeal Feminism* (Indianapolis: Indiana University Press, 1994), p. 23.
- ⁸ See for example, Andrew Saint, *The Image of the Architect* (New Haven: Yale University Press, 1983); Robert Gutman, *Architectural Practice: A Critical View* (New York: Princeton Architectural Press, 1988); and Spiro Kostof, ed. *The Architect: Chapters in the History of the Profession* (New York: Oxford University Press, 1977).

- ⁹ Walter Gropius, *Scope of Total Architecture* (New York: Collier Books, 1962 [1943]). See also Bernard Michael Boyle, "Architectural Practice in America, 1865-1965 — Ideal and Reality," in Spiro Kostof, ed. *The Architect: Chapters in the History of the Profession* (New York: Oxford University Press, 1977), particularly pages 320-330.
- ¹⁰ Manuel Castells, *The Informational City: Information Technology, Economic Restructuring, and the Urban Regional Process*. (Cambridge, MA: Blackwell Publishers, 1989), p. 6.
- ¹¹ Edward W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (New York: Verso, 1989), pp. 185-188.
- ¹² David Harvey, *The Condition of Postmodernity: An Inquiry into the Origins of Cultural Change* (Cambridge, MA: Basil Blackwell, 1990), p. 156-158.
- ¹³ These transformations can be seen across architectural practice, from Rafael Viñoly's design and oversight of the Tokyo International Forum from his small office in New York, which expanded to a design team of nearly 70 individuals, to the design of the Korean Presbyterian Church of New York, by an affiliation of three very small firms whose principals, Douglas Garofalo, Greg Lynn, and Michael McInturf, work out of three different cities. Deborah K. Dietsch, "Urban Nexus," *Architecture* 85(October 1986): 110-135; "Korean Presbyterian Church of New York," *Architecture* 86 (January 1997): 80-81.
- ¹⁴ Colomina, "Battle Lines," p. 6.
- ¹⁵ These include: Iris Marion Young, Rosalyn Deutsche, and Donna Haraway.
- ¹⁶ Haraway, *Simians, Cyborgs, and Women*, p. 170.
- ¹⁷ Katerina Rüedi, "The Architect: Commodity and Seller in One," in Katerina Rüedi, et. al. eds. *Desiring Practices: Architecture, Gender and the Interdisciplinary* (London: Black Dog Publishing Limited, 1996), pp. 241-2.
- ¹⁸ Haraway, *Simians, Cyborgs, and Women*, p. 164.
- ¹⁹ Former *Progressive Architecture* editor Thomas Fisher noted this in 1994 when he questioned whether the profession's institutions could restructure as a result of the reconstitution of architectural practice. Thomas Fisher, "Can This Profession Be Saved?" *Progressive Architecture* 125(February 1994): 44-49+. This was the first issue in *P/A*'s new format focusing on the "changing processes of architecture and on the larger problems facing architects." (John Morris Dixon, Editorial, p. 9). The magazine was bought out by *Architecture* two years later.
- ²⁰ Crosbie's *Progressive Architecture* piece on architecture schools is one striking example of this. More recently *Architecture* magazine devoted an entire issue to education, publishing four different positions on the relationship of education to the profession, including Reed Kroloff's "How the Profession is Failing the Schools," *Architecture* 85 (August 1996): 94-95. The issue also contained several practitioners' "grading" of the schools. The responses were broad. While critical of the schools, few of these "leading architects" accused the schools of failing to "train" students for practice. The section that dealt with "alternative" schools suggested that alternative education could not take place in "traditional" settings. *Metropolis* magazine's recent issues on design education take a much broader approach, looking at diversity within and between schools and the broad variety of practices and professions that graduates ultimately pursue. See *Metropolis* 15 (September 1995) and 17 (October 1997). Of course, this is not a trade magazine devoted exclusively to the architectural community.
- ²¹ Ernest L. Boyer and Lee D. Mitgang, *Building Community: A New Future for Architectural Education and Practice* (Princeton: The Carnegie Foundation for the Advancement of Teaching, 1996).
- ²² One of the most successful endeavors of this kind was a series of year-long events and panels at Harvard University's Graduate School of Design published as William S. Saunders, ed. *Reflections on Architectural Practices in the Nineties* (New York: Princeton Architectural Press, 1996).
- ²³ bell hooks, *Yearning: race, gender and cultural politics*, (Boston: South End Press, 1990), p. 31.