2

Disciplining Knowledge: Architecture between Cube and Frame

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> This group of elements, formed in a regular manner by a discursive practice, and which are indispensable to the constitution of a science, although they are not necessarily destined to give rise to one, can be called *knowledge*.
>
> —**Michel Foucault, *The Archaeology of Knowledge***

Design teaching in architecture school often begins with the cube as its first topic. The same on all sides, the cube appears neutral, without hierarchies. Its only direction that of gravity, it seems to be free from symbolic content or technical constraints. It is white, pure, available yet autonomous, waiting to be filled or excavated. Like all designed forms, this one is a materialization of ideology, for the cube personifies the subject of teaching, the new student, as much as it is the first object of architectural work. Its apparently mute regularity points the direction that architectural knowledge is meant to take and the formats it should follow.

It may be the distance and simplification of history that allows the following generalization, but it does seem that the elements of architectural knowledge one hundred years ago were much more identifiable to those teaching the discipline than they are now. There was then some agreement that architecture could spring from the classics and other eclectic formats—Renaissance, Gothic, and so on—that these made a

quantifiable body of rules and precedents to which were added the possibilities of structure and construction, drawing and presentation, all finally augmenting the diagram provided by the past and program. Structural rationalism, art nouveau, and early functionalism provided a fretful counterpoint. If indeed things were more precise then, the surrounding cultural upheaval couldn't much longer support a simple environment for design at the last fin de siècle, and by now the ensuing collapse of master narratives and the proliferation of global media make any relatively terse definition of architectural knowledge quite impossible. Furthermore, its definition will always be a subjective act with political implications. The material we use as architects and pass on to others as teachers is not homogeneous. Although the sources and substance of architectural erudition are essential topics, especially when instruction is discussed, they are rarely candidly presented or critically described. Such a direct approach may seem too pedantic or may threaten doctrines that thrive on unquestioned acceptance, but lack of direction leads directly to the confusion of much contemporary pedagogy.

Not surprisingly, the ideological struggles that accompany teaching often concern knowledge. The principles of a master or theoretical group—New Urbanist, Deleuzean, Beaux Arts, phenomenologist—are passed on to students as formal dogma without the more thorough understanding held by those passing them on. Such agendas, while explicit in attempts to control and reduce, are fortunately nearly impossible to fulfill. Knowledge cannot be so easily managed in a data-saturated environment like the present, for it includes the vast field of information relevant to architecture, including the methods and devices by which these data can be made available in the design process and the criticism that accompanies that process. Only the spin that knowledge is given can be somewhat directed.

> [A]rchitecture problematizes the very differences we depend on for keeping it still and inert: . . . It is the nature of the epistemic to promise presence and deliver absence. (Ingraham 1992, 56)

To be anything other than speculative when deliberating architectural knowledge and its transfer seems just as "historically precluded"[1] as identifying something more precise than its relation to other factors. *Knowledge* itself reverberates with such rhetorical volume as to be almost

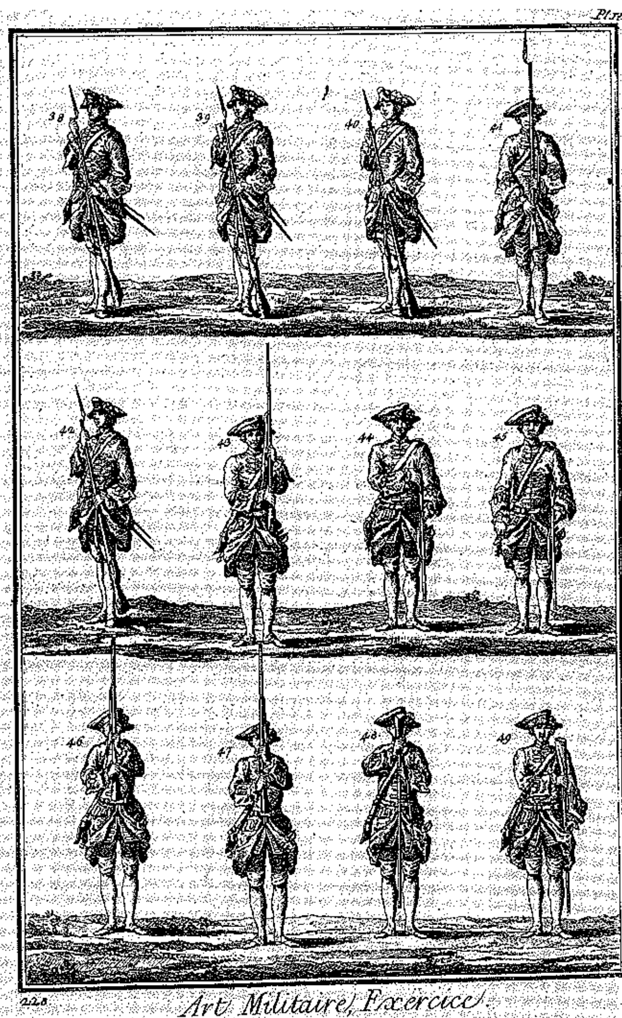

Figure 2.1a. From *Encyclopedia*, by Denis Diderot.

indistinguishable from the ideological white noise generated by the charged terms *freedom* or *justice* with which *knowledge* shares a canonical position. Implicitly mercenary and open to self-serving interpretation, these sorts of terms are bound to society and power. It could be said that knowledge is little more than the particular intellectual territory that authority carves out for itself within any particular discipline and thus is of interest only as a foil against which to frame alternatives. To reduce the term in this manner seems to limit its use pointlessly,

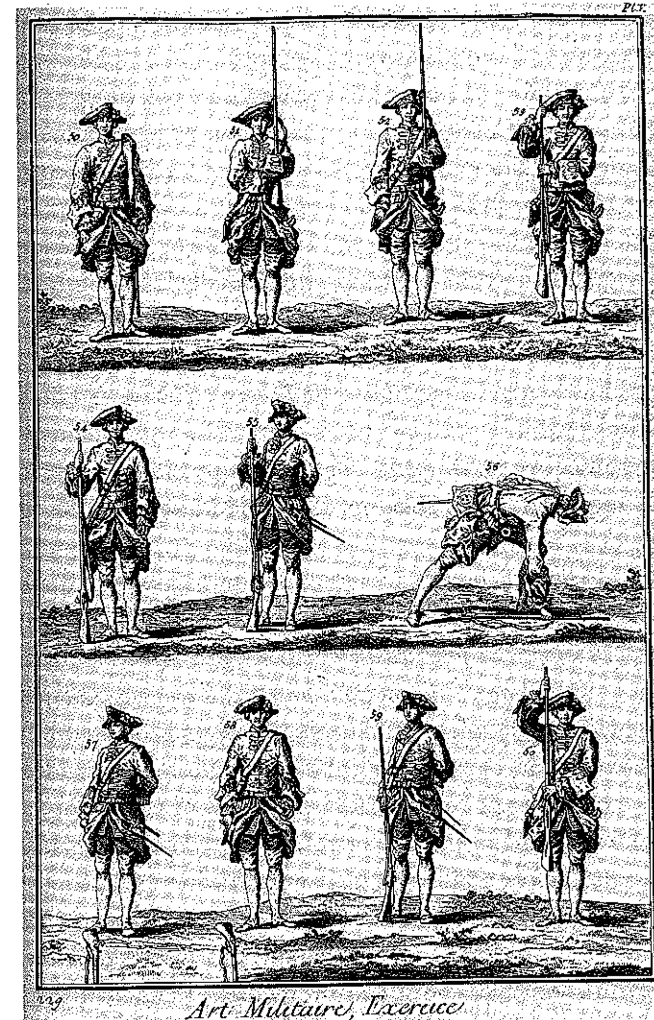

Figure 2.1b. From *Encyclopedia*, by Denis Diderot.

or to surrender it to the questionable uses of others,[2] but any discussion must certainly take into account the collusion of knowledge with the status quo, especially when confronting an art as compromised as architecture.

But to defend architectural knowledge is to deconsecrate it at the same time.[3] While buildings are relatively permanent, data pertaining to them are anything but. Knowledge is cheap, pervasive, and indiscriminate. It is everywhere, although we respect little of it, continuing

to distinguish "high" knowledge from the rest, with arguments far less sophisticated than those addressing other postmodern phenomena.[4] To avoid evident problems of definition, knowledge will be presented here as material, method, and location, rather than as essence or standard, thus intentionally sidestepping epistemological or hermeneutic structures, both out of respect for their origins and to avoid the delirium of current interpretations. As it did one hundred years ago, *knowledge* still reflects the grandeur of the academy, allowing ideologies both conservative and avant-garde to claim in its name to have tapped into a mother lode of erudition so deep as to be irreducible and incorruptible. While the aura of knowledge is fading in the present climate of co-optation, easy political readings, and soft poststructuralism, it remains essential to continue the process of realignment made possible by the concept's weakness, recognizing the shifting criteria it must confront to regain strength.

In architecture the border between raw information and a conventional notion of refined knowledge is quite fuzzy. The search in this gray zone for a *discursive practice* may help to partially recover these troubled terms — *knowledge, information, practice, discourse.* The juxtaposition of the facts of the practical and the concepts generated by intense discussion could form a rich field in which to both teach and practice. Although the contemporary climate is hostile to them, theory and history should still play an important role in this process. Theory necessarily must determine a knowledge base from which to spring. History both describes and prescribes that base. Theory and history are essential to education, but the former has a bad name, and the latter is considered of little relevance to a culture focused on the future and the market.

> Knowledge in the form of an informational commodity indispensable to productive power is already, and will continue to be, a major — perhaps *the* major — stake in the worldwide competition for power. It is conceivable that the nation-states will one day fight for control of information, just as they battled in the past for control over territory, and afterwards for control of access to and exploitation of raw materials and cheap labor. A new field is opened for industrial and commercial strategies on the one hand, and political and military strategies on the other. (Lyotard 1984, 5)

Lyotard and others have emphasized the primary place of knowledge in the late-twentieth-century market. Any attempts to put it elsewhere only seem to ease its merchandising. As with all political phenomena, architectural knowledge is vulnerable to the pressures of a rapidly changing cultural climate and is influenced by a society that not only patronizes production but also is the entity that architecture must depict. This is one of the contradictions that define our practice and muddle our discussions — the dependence on greater culture for sustenance and the simultaneous need to critically engage that culture. Attempts to control knowledge and the architectural forms to which it alludes drive our curricula in school and our goals in practice. The radical epistemological shift that accompanied the rise of the modern movement is an example. Abstraction, new objectivity, the denigration of history, the paradoxically joined accolades to inspiration and the technical, the questionable acceptance of avant-garde postures, the myths of form's purity and of utopia's realization: these modernist criteria still determine the cultural frame in which we find ourselves, a frame in which form, with its ties to power and economics intact, remains the center around which all debate tiptoes.

Like the shapes that pass each other on the runways of architectural enthusiasm, each arguing its immunity from the overheated market it thrives on, the information that accompanies these forms is similarly dependent. As with all commodities, knowledge is susceptible to fashion. The frame changes with the painting. The critical model that had commanded the utmost respect and awe will cause condescension to radiate a few years later in the more refined halls of discourse. Critics continually attempt to absolve themselves of the terms in which they had couched their recent musings. Remember *type, context, autonomy, narrative, semantics, fragmentation, weak form*? Such fashion in thought clearly has problems. It acquiesces to market forces, as was evident during the theoretical *arrière-garde* actions of the 1980s, and it tends to dismiss its predecessors with a scorched-earth vehemence close to critical amnesia.[5] Such fickleness can lead to the worst sort of superficiality, as it discards very important ways of thinking. It encourages posturing and propaganda. But fashion should also be defended, whereas we tend to use the term exclusively to condemn, implying personal distance from a circumstance from which none of us is immune. Fashion purges and

rejuvenates. It is inevitable and exhilarating. It polarizes and crystallizes, shining with a flashy brilliance for the short moment that such hot phenomena can survive. It is a necessary and inevitable condition of any aesthetic endeavor and perhaps of any cultural action. To dismiss as "merely fashionable" is to fall under fashion's most potent spell. Hemlines must go up and down, but it is good to remember that they always serve the market.

Current reassessments of knowledge suggest that its potency lies outside the academy, that an epistemological vernacular functions in counterpoint to "high" knowledge, a robust native strain immune from fashion. This subset of the general argument for the "vitality" of indigenous structure over architecture — of rap over poetry, of graffiti over painting — is burdened with the contradictions of the pastoral and with a degree of professional prevarication. It is indeed true that we are swimming in noninstitutional riches. In the United States, specifically, African American and immigrant contributions vitally enrich the necessarily diluted offerings of established cultural bodies. But to assume the value of one over the other is the result of another of the contrived oppositions that confound our existence and hide agendas.[6] It seems wiser to scrutinize our own systems of organized erudition than to presume a savage nobility in those that are more spontaneous or popular. Tangential to the defense of vernacular knowledge, and occasionally co-opting it, are calls for the "real" accompanied by easy interpretations of the architecturally political. Such formulations are indeed current, one might say fashionable. Like all such phenomena, they suffer from a superficiality that allows energy to be directed toward personal goals. This *politics lite* is determining debate in the academies. While taking a stance that could be presumed to be opposed to conservative positions, current political attitudes often thrive on many of the same attitudes.[7] Although it is encouraging to see political criticism become mainstream, at least as long as any popular phenomenon can stay so situated, it is hard to accept the self-righteousness that being mainstream tends to encourage.

Especially in a political economy such as the United States, a focus on knowledge moves immediately to production. Endemic to all American enterprise, the focus on product shapes any discussion of architectural knowledge. It is clear that the making of architectural form depends

on diverse sources: history, philosophy, economics, science, political and cultural studies, aesthetics, technology, sociology. It is also clear that form is the bottom line, the end for which these disciplinary borrowings are a means. This is one of the great contradictions of an endeavor that is largely intellectual, verbal, administrative, technical, social, and poetic. Finally, only form is left, built or drawn. Form drives our teaching and the frantic pressure toward realization. Teaching methodologies dissolve into a push for "complete" drawings, for sexy models, for things, proof, culmination.

Given the central role of architecture schools in both defining and producing knowledge, the focus of this chapter will now turn toward teaching procedure. This may indicate a certain critical sleight of hand, since one way to avoid the obvious pitfalls of an atavistic view of knowledge is to move the discussion to the spread of information, here understood as nonantiseptic, contaminated, even promiscuous. The imparting of architectural data and skills will supersede the image of "pure" knowledge as an immaculate ether, an image that, through its reliance on metaphysics, paradoxically advances an intuitive paradigm that is in fact a form of antiknowledge. The shift of emphasis is from a troubled and possibly outmoded concept to didactic procedure, identifying (to turn Jonathan Crary's description of the camera obscura toward teaching) "its multiple identity, its 'mixed' status as an epistemological figure within a discursive order *and* an object within an arrangement of cultural practices" (Crary 1990, 30). The camera obscura is an apt metaphor for the academy — the dark enclosed cube where the fluid image of the world is reversed, solidified, and recorded in another dimension. In that dark space, specific practices and rituals unfold. All are tendentious in their pedagogy. None is without presumption.

If, a few years ago, teachers of architecture urged students not to retreat so readily to the library and the image-mart of the journals and the monographs, now they are asking that same group to gather more material, historical or contemporary, outside their own impulses. Presumably the increasing introversion on the part of students is not due to their faculty's lack of interest or expertise. One can only suppose the opposite, given the continuing migration to faculties of architects trained during a period when analysis and history were considered to be very

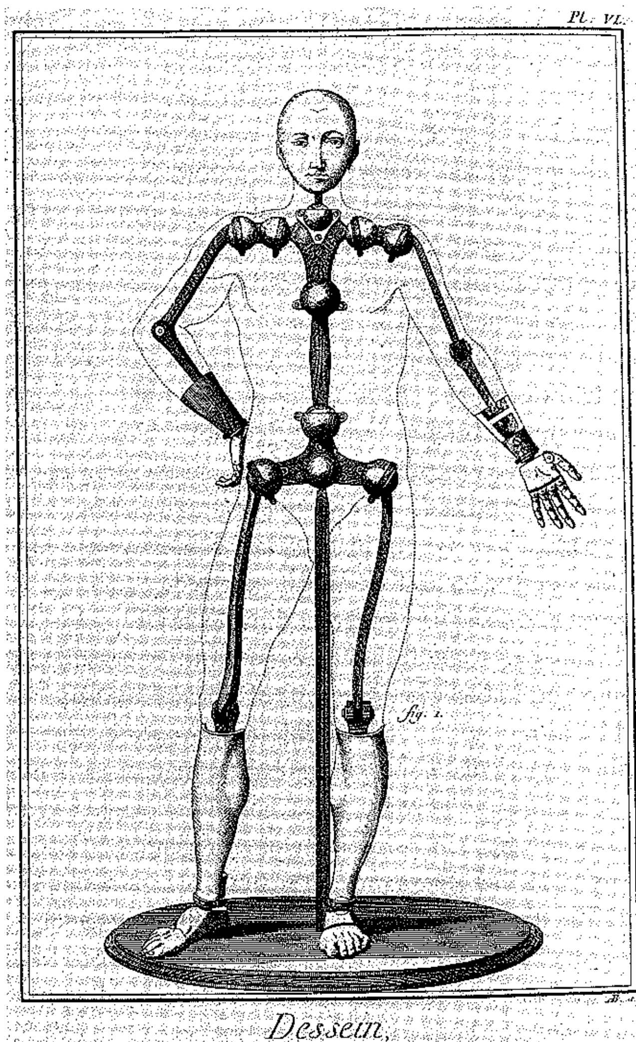

Figure 2.2a. From *Encyclopedia*, by Denis Diderot.

important. Instead, the lack of inquiry seems related to an expanding belief that such inquiry is more or less irrelevant to the process of designing, that it lies outside pertinent knowledge. With this attitude often comes a general hostility to a priori architectural thinking and to modes of learning that may be analytic or information based in the first place. If we assume that this viewpoint does not come from laziness or a love of ignorance, nevertheless it does eliminate the need for many

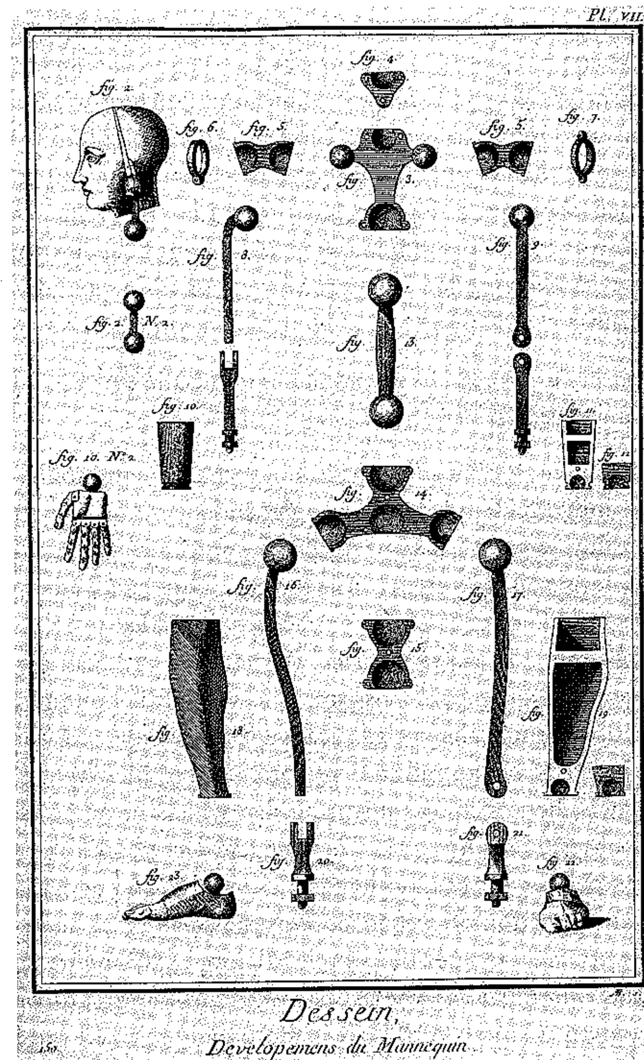

Figure 2.2b. From *Encyclopedia*, by Denis Diderot.

of the more strenuous aspects of learning associated with scholarship, with the study of the past and with logic and the expository, and tends toward an anti-intellectualism that finally argues for an *other* of rigorous thought. Replacing the gathering and analysis of data is a growing faith in intuition and certain historically exhausted notions of creativity that traditionally fueled the modern movement but have been in

serious doubt since the first strong critique of that movement more than thirty years ago.[8] It would be repetitious to belabor the obvious problems inherent in easy conflations of "biotechnical determinism and free expression" as outlined as early as 1967 by Alan Colquhoun, but the schools (here I do not include just the students) seem either not to have learned these lessons or to have forgotten them in a reaction against some of their worst dogma. A very precious baby has gone with the tepid bathwater of late modernism, rationalism, and historicist postmodernism.

> The tendency to fetishize the unconscious is inherent in the image of unconsciousness itself. (Lefebvre 1991, 208)

The argument for intuition assumes that this commodity lodges within the individual and is largely independent of, or even compromised by, things external. Design studios become exercises in automatic writing. Professors urge "consciousness lowering," the production of form beneath reason. The focus of these practices, intended to release what Adorno calls the "I of expressionism" (Foster 1985, 63), can also foster self-absorption verging on narcissism. The student is homunculus. In his or her tiny form is the curled creative force, whole and waiting. It would prejudice genius to call students' attention to the given. The goal of pedagogy is then opening, nurturing that which already exists. This takes a lot of responsibility away from the teacher, whose role becomes that of an expediter, excavating the artistic impulse, and perhaps deprogramming information or preconceptions that may block such excavations. This strategy accepts the simple alignment of architecture and the arty, the emotional and the expressive, returning to a theoretically suspect modern pastoral. Although it thoroughly rejected the formats of modernism on one level, architectural teaching returns to them tenaciously on another. What appears to be a rejection of discipline is in fact a particularly rigid historical practice. While Virgilian in origin, this concept gained force during the Enlightenment and the nineteenth century with the canonization of "the innocence of the eye."[9] To propose this paradigm is in fact to revive a troubled and contradictory litany. A historic theme passing from the pastoral, through the romantic, into the modern, finds particularly receptive ears in this millennial New Age, as it did during the late 1960s and early 1970s.

Several factors have led to this revival. In this century, architectural imagery takes its cues from the fine arts, and at least since the mid-seventies, painting has been both figural and decidedly expressionistic in character and doctrine. There were problems with this. Hal Foster writes, "expressionism denies its own status as a language" (Foster 1985, 59–78). By nature, its anarchic charge and solitary persona do not invite the communal impulse that produces discourse. Emotion substitutes rhetorically for a shared communication system. Expressionism markets itself more as an attitude, resisting an easy resurrection of its forms. The contradictions inherent in an academic revival of so impulsive a phenomenon may render the notion of *neoexpressionism* as paradoxical as was *deconstructivism*. Nevertheless, during the seventies and early eighties, the work of Schnabel, Clemente, Chia and Cucchi, Basquiat, Anselm Kiefer, and Elizabeth Murray was readily available in the galleries and, at light speed, in the museums, accessible to architects perpetually hungry for new formal material. Postmodernism, while ineffectual on many levels, returned to a discussion of meaning with such a vehemence that for a long time, it will be difficult to restore the self-proclaimed symbolic silence of the modern movement. Consequently, the alloy of the expressionist and the figural in postmodern painting proposed a new design zeitgeist while avoiding the repetition of prevailing forms.[10] This satisfied an Oedipal need to reject the immediate and suddenly unfashionable predecessor while maintaining its conceptual foundations, and to embrace a formal ancestor safely legitimized and neutered by time and museums. In a discipline in which style still rules, the desire to disengage from that which was popular (and therefore must soon become reciprocally unpopular) is another reason for the rise of a neoexpressionist architecture.[11] On its surface, it seems antithetical to its immediate predecessor, postmodern pastiche. The "anxiety of influence" was diminished. Also, some architects — Gehry, Zenghelis and Koolhaas with Zaha Hadid, Peter Cook, and others at the Architectural Association — had never endorsed the quickly stale excesses associated with the "historicist" phase of architectural postmodernism. Many of po-mo's most zealous practitioners and defenders were also ready to distance themselves from their previous fascinations by the mid 1980s.

At recent international conferences many participants addressing architectural education have made the argument for an early course of

study that would "free" the novice designer.[12] Painting, collage, and the sculptural exercises were seen as enabling this "freeing." All derived from the fine arts, which, for architects, still resonate with magical associations to the avant-garde, the aura of creativity, and artistic license. Take, for example, the enormous success of the middling installation artists Diller and Scotidio among architects. That things artistic are automatically freeing was an accepted conclusion, a holdover from early modernism and its beginning design courses, particularly the enormously influential formats of the Bauhaus, that included the arts, architecture, and craft in one regime. This assumption both idealizes and condescends. It is romantic to imagine that the art world is not another relatively calculating professional sphere, bound by its own strictures: entrenched institutions of display and instruction, market pressures, fierce politics, poseurs, trendiness, and snobbism. Furthermore, to assume that art is fundamentally expressive and free is to demean a field that has relied on a complicated synthesis of rationale, history and precedent, skill and technique, theory, mimesis and nonfiguration, as well as economic and curatorial considerations. Great art sometimes produces results that appear expressive. Rarely is it so conceived or made. More rarely is it easy or fun. Titian and DeKooning struggled and ruminated, and worked hard. They gained skill and knowledge in the workshop of Bellini or the academies in Holland. For students to suppose the opposite is understandable. For faculty to promote this supposition is less so.[13]

Most important, the belief in the implicit liberating energy of the arts derives from extremely dubious and antiquated notions that propose "freeing" as the first task of education. It is indeed true that a student is not an aesthetic tabula rasa. He or she brings a lot to school, having been exposed to the media and the rich information stew provided by family, previous instruction, and places lived in and visited. Psychology filters and transforms these data in a period when information has never been more cheap, dense, or hierarchically neutral. The academy's effect is modified by other factors, by the material students bring with them, the vernacular sources previously mentioned, and the inevitable instruction in the practical arenas of the profession provided during and after school. Is this what students need freeing from? Perhaps instead they need to perceive more critically and of course to add the more cosmopolitan data available via the faculty, students, and environment of design school, to develop the material and methods for a "discursive practice" in fact. But then, are art exercises, with their tendency toward more indiscriminate imaging typical of entertainment media, the appropriate mode for this "freeing"? It seems that in an age such as this, one needs to develop the critical ability to gather, filter, order, metabolize, synthesize—those very processes that conventional education has encouraged.

Those who have absorbed the enormously complex data necessary for even rudimentary architectural design work inevitably find ways to "forget," to synthesize subliminally, to not be smothered by information. But to urge, either through curriculum or treatise, those who have not yet assimilated, to resist assimilation a priori seems extremely questionable. Maybe we are again at a moment like that when the modern masters, fully aware of the architectural history that they were consciously overturning, forbade their students from studying that history, arguing its irrelevance and thus producing a generation from whose mediocre work we are still recovering and against which we are still reacting. It seems absurd to assume that because analysis is by nature imprecise, which poststructuralism convincingly illustrates, we should not attempt to use analysis as a temporary framework. To come to this conclusion is as silly as denouncing ideals because life tends to disappoint them. Both ideals and analysis allow us to "throw away the ladder after [w]e ha[ve] climbed up it," as Wittgenstein urges (Wittgenstein 1961, 151).

Here, perhaps, is the root of the problem. The cycles of "freeing," creativity, and so on are accompanied by an innate hostility to the academy and its practices—to ordered thought, disciplined and rigorous assimilation and analysis, study in the most precise sense, and things associated with rationalism, currently the most unsavory of intellectual phenomena. History and urbanism, which has become history's physical manifestation, are considered by many students and faculty to be of no relevance to a culture positioning itself for the twenty-first century. Concern for the urban is reemerging in current political debates about architecture, but the way this concern is manifested seems to avoid engagement, either insisting on an abstraction of the city that appropriates it as more sexy shapes or concentrating on social concerns of such a direct kind that it is difficult to see a place for architecture in their solution given the collapse of utopian teleology. The urban strategy on one

hand is to aestheticize to the point of bourgeois acceptability and on the other to materialize to the point of aesthetic impotence.

Owing, in part, to the ideological conflicts that sit at the core of the modern sensibility and that threaten the delicate constructs in which Americans find comfort, we are also experiencing a rejection of the concept of the institution by students and faculty, a rejection that runs parallel to the national aversion to government. That institutions are flawed seems an inevitable result of their existence. On the other hand, an innate hostility to their epistemological apparatus leads to the strange proposition of antigovernment types — that we should try to kick away the chair in which we sit. The hostility to both knowledge and its location is bizarre coming, as it does so often, from within the academies where little else is offered.

Schools themselves are loath to change. Tenure stupefies, mediocrity is self-perpetuating, and entrenched faculties stubbornly defend fiefdoms, along with recycled course syllabi, habit, and tradition — all the innate conservatisms that come with the territory. Meanwhile students and practitioners are alienated from a pedagogy that they feel should support them. Although clearly biased, their attitudes reflect some genuine problems with which schools are struggling.[14] Sometimes in open defiance of teaching institutions, the profession attempts to influence the definition of architectural knowledge through the tendentious content of registration exams, imposing strictures on an academy that intermittently feels it should prepare students for these ordeals. Accrediting boards function similarly, prescribing the values and criteria pertinent to teaching and practice.

In the schools, the actual pressure points remain tightly sealed. Here I refer to change that might unleash curricular innovation without qualification, challenging the Socratic format of the design studio, even its necessity, challenging the obstinate structure of support classes and the intense doctrine embedded in distribution requirements, challenging the integrated curriculum and design as the hub of activity for all students. Such major reassessment is almost always too threatening to established teaching formulas and feudal curricular interests. Consequently a delirious rupture occurs elsewhere, avoiding the tougher issues that a troubled field faces. Sharing imagery with pop music and sartorial

fashion, a seventies low-stress pastoral version of "freedom" vies for the hearts and minds of students with more severe "political" postures.[15] A powerful and historically insistent doctrine backs up the former. Rousseau, Nietzsche, Johannes Itten and the early Bauhaus, Marinetti, Kokoschka, Loos and Karl Kraus, Trotsky, Artaud and Mayakovsky, Duchamp, Cage, Bataille, Barthes, Deleuze and Guattari, even Tim Leary have made this a familiar and blindingly exciting call to arms, which should be made with all the opulence and complexity that its turbulent history and recent critiques of the avant-garde have provided. Such an incendiary appeal must also be gauged according to the particular disciplines toward which it is aimed. It can invigorate and debunk and it can, of course, devolve as in the case of Marinetti.[16] Certainly the pitfalls of avant-gardism have been amply marked by writers from Tafuri and Habermas to Foster and Jameson, but nevertheless this remains a primary and unquestioned path for much of architecture's critical and practical elite. Peter Eisenman and Frank Gehry are obvious examples. It is a flawed presumption that meandering into other disciplines or redolent obscurity are *automatically* important or productive (and here I would argue, somewhat polemically, that import and production are desired ends for theory as well as practice). It is a matter of quality and content that distinguishes the fabulous from the fatuous. I question the aura that appears to accompany intrinsically such endeavors, an aura largely evaporated by recent history while furiously invoked by those who believe it still surrounds them.[17]

In the end, the desired "freeing" may be from architecture itself, from its tough facts and tougher paradoxes. And in some cases, this is where both theory and practice have blissfully arrived. Despite the intellectual subtlety demanded by the intricate practice of architecture, our community remains very literal in its hermeneutics. Critical connective tissue is lacking, and theory itself remains largely form driven in its research and conclusions.[18] Theory's flights and its audience's skepticism limit the possibility of an active link between concept and making. This is not particularly surprising, since many contemporary voices have become unhinged from issues or modes of discussion that would continue to interest or inform those outside their immediate penumbra. On the other hand, to assume that architectural thinking is worthless or perma-

nently peripheral must be construed to be an excuse for those unable or unwilling to make the effort to form the vital connections that theory offers, or those made uncomfortable by forming those connections.

> For me it (writing) is very brutal and primitive, because for me architecture is an intellectual discipline and for me writing is the privileged communication of our intellectual disciplines. So writing is absolutely without question necessary. We abuse the alibi of the otherness of our profession.... You cannot write if you don't have ideas. I think there is still a very strong section in architecture that somehow hopes that there can be architecture without ideas. (Koolhaas 1993, 43)

The contemporary American climate is hostile to intellectual practices. This is not surprising in the land of action, where the overly contemplative has classically been treated with suspicion in a culture based on certain pastoral and populist exhortations of the nobility of labor, simplicity, and the anti-urbane.[19] It is ironic that a nation with such a strong impulse toward social reconstruction at the same time generates a resistance to the new social entities constructed and to the theories that came into play to construct them. A thick philistine vein runs under our culture and surfaces in the desires expressed in our academies by students and faculty. This vein flows with a media-fed stream of fashion and propaganda. Given that current instructional ideas seem to avoid the most pertinent aspects of culture and are profoundly compromised by the strong discussions of the last thirty years and by the collapse of the doctrines that supported them, must we be tyrannized again by a simplistic notion of artistic liberation and its oafish sidekick, anti-intellectualism?

In the schools, discussion of method, which can be very threatening to entrenched teaching practices and recyclable syllabi, is often replaced by doctrinal bickering over the nature and value of what is taught, culminating in portentous calls for change and quality but little action. I am suggesting that if we are not going to transform our schools radically in response to the pressures of modern culture, if we accept the methodological premises presented by standard curricula and the entrenched mechanisms of the academy, then we should try to use them. These include information gathering and assimilation, analysis and synthesis, the study of the past and of culture, of ideas and aesthetics, the production of ordered thought and presentation of that thought to others. These seem preferable to tacitly agreeing to their irrelevance while maintaining institutions that are primarily equipped to support them. In short, if we cannot or will not do what we should—effect changes in the way we educate architects—then we should use, critique, and transform the instruments we have.

My argument should not be confused with the reactionary call for a restoration of the clarity of the Enlightenment, to a "golden age" before Freud, Marx, Nietzsche, a call that veils a return to a prerevolutionary order few of us want or would be included in.[20] Provisional definitions of "knowledge" and "discipline" can lead to grim conclusions, and therefore a plea for intensity within the many vehicles of knowledge transfer must be continually reformulated. While I have questioned many of the clichés and the presumed progressivism of modernist or avant-garde postures, it was not done to serve convention or reaction. To expose the contradictions and innate conservatism within the glibly progressive should make action possible. It seems necessary to walk a Tafurian line between neoconservative strategies of retrieval on one side and the exhausted paradoxes of the avant-garde and superficially "political" on the other.

Architectural design remains broadly synthetic in its reach from the depths of the artistic impulse to the rarefied heights of capital and the dictates of power. Design seems to be a synthetic process of filtering and interpreting, of metamorphosis in the rich mythmaking sense more than it falls into the exhausted and indefinable, and often unteachable, category of "creativity." It is powerfully cerebral at its roots. In the wide spectrum of possible didactic positions that can be addressed in and out of the academy, schools seem best prepared to aid the synthetic and analytic and to store and provide information. This may seem terribly pedestrian, but design school is a unique opportunity with special attributes, given the lessons provided in other architectural arenas. It is true that most design exercises insist that they do all this, but after closer inspection, they seem to reinforce the dogma of intuition over rigor and of thing over substance. The results of these exercises appear quite uniformly formal, object fixated, and finally consumable, despite accompanying arguments that they are just the opposite.[21]

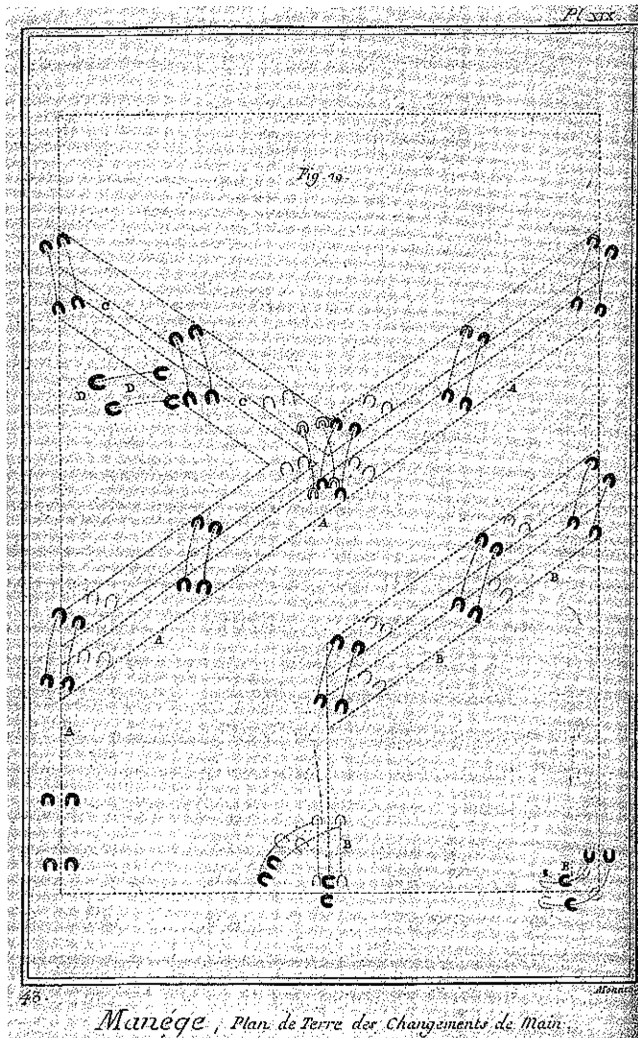

Figure 2.3a. From *Encyclopedia*, by Denis Diderot.

> To begin with, there was the scale of the control: it was a question not of treating the body, *en masse*, "wholesale," as if it were a indissociable unity, but of working it "retail," individually; . . . In becoming the target for new mechanisms of power, the body is offered up to new forms of knowledge. (Foucault 1979, 155)

A finer focus on the specific example of early design education reveals the criteria that determine the politically charged modes knowl-

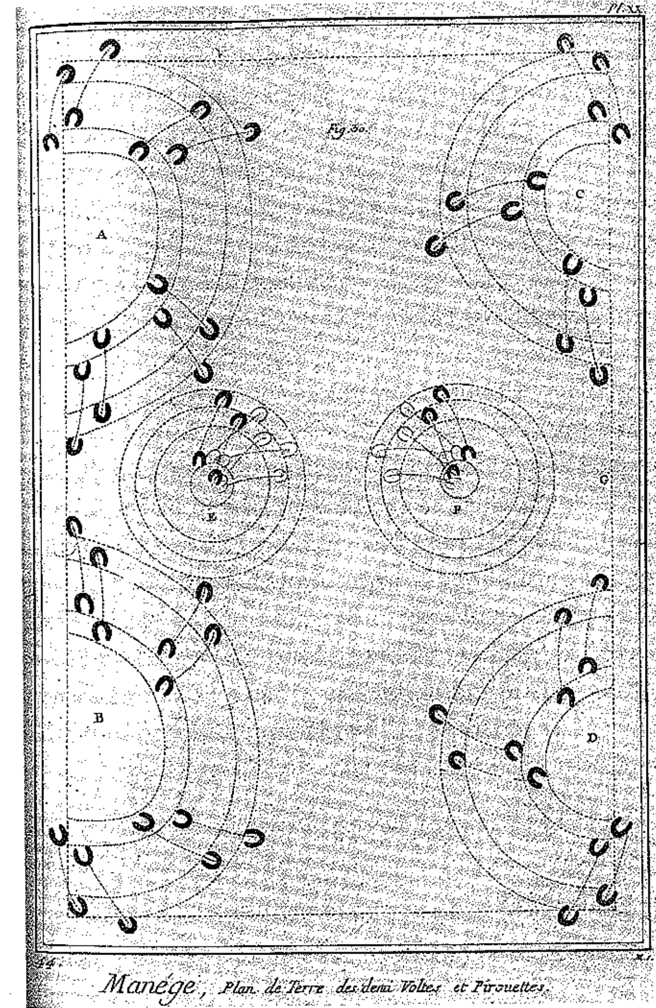

Figure 2.3b. From *Encyclopedia*, by Denis Diderot.

edge will assume. The education of the beginning design student may be seen as an Arcadian time of innocence and sharing, pure and clear. It is all these, but this moment also sits at a cusp where the disordered and intuitive become markedly less so. The crucial first studios instill an ongoing attitude. It is the period of maximum student receptivity generated by novelty and thus the point at which ideology is most readily transferred: the boot camp of architectural education. This fraught period is particularly vulnerable to emphatic doctrine and is compli-

cated by the biases of extremely noninnocent individuals who determine curricula and exercises. The simple promise of beginning becomes immediately compromised by the fact of the academy and the fictions of an information-glutted culture. Struggles rage beneath the standards of "reality," "craft," "new technologies," "diversity," and "sustainability," to name a few of the major protagonists. Beginning design, as practiced in many schools of architecture, is based on debatable definitions of the parameters and issues that the field faces and that school work consequently might address. These issues ought to respond explicitly to the culture architecture serves and to the designer's role in representing that culture. Instead they remain surprisingly hermetic.

A friction exists between *beginning*—smelling of the pastoral, liberty, and spontaneity—and *institution,* redolent as it is of the rational, authority, and order. This, then, is the field in which design teaching starts and the abrasion of discipline and innocence presents enormous problems and great possibilities. The problems have plagued the institution at least since the inception of modernism and its paradoxical design formats. As already stated, the current uneasy truce between romantic notions of the artistic and perfunctory homage to professionalism and technology repeat modernist tensions without the passion that enlivened those tensions.

> When philosophy has finished showing that everything is a social construct, it does not help us decide which social constructs to retain and which to replace. (Rorty 1994, 227)

In this chapter, architecture is viewed as necessarily compromised by history and by the physical arena in which it expresses itself and of which it becomes part. Consequently, the first teaching of design as a primarily compositional endeavor, with the implied agenda of unleashing innate creative genius in the young designer, is problematic. I refer to the primarily formal exercises—cube transformations, nine-square manipulations, color studies—that shape many elementary design courses. Their roots lie in the interdisciplinary routines of the early modern design education, and they indeed suffer from some questionable presumptions of that era. These exercises are indistinguishable from similar courses taught in art schools, and they display a similar attitude toward education both in the fine arts and in architecture. As an architect, I can only speculate on the function and goals of the fine arts, but a primarily compositional impulse in our particular art seems problematic. Architecture is primarily an aesthetic endeavor, but finally it is a cultural act.

As previously mentioned, the current architectural period is one of partial return to codes of expression, abstraction, and autonomy, though enthusiasm for these attitudes seems to be diminishing.[22] Concurrently there has been a revival of teaching programs with similar objectives. Tough issues—political, economic, disciplinary—are avoided, and beguiling form is achieved. The products look good, and given their universal source and the reductive rules for their alteration and material, they look good together. Students and professors feel good, and a sense of accomplishment leads to the notion that successful design and, by extension, learning have been attained. Given the complex criteria that come into play in design and the discouragement or confusion they can engender, it is indeed necessary to provide reassurance. A sense of achievement should accompany early design work, but it must also be recognized that the restrictive criteria for formal production, while generating instant fulfillments, also promote powerful notions of what constitutes a body of architectural knowledge.

Curriculum is presented in abstract problems permitting certain limited "moves," ensuring an attractive product almost guaranteed by the rules, but at the same time implying an ethos of "design as game" that avoids the messy issues that face a troubled discipline. Architectural design is viewed as a contest to be won through the clever manipulation of its rules, a riddle to be decoded. The rhetorical search for a "solution" employs a terminology linked to mysteries and puzzles and implies a definite teleology. This then ratifies the questionable practice of grading design studio, a practice young students, trained in rote learning, used to be weaned from. This bias continues in the intricate vocabulary of "pieces," in the habitual identification of gambits and strategies. Military action, domesticated on the game board, here finds safe expression in the terms of design.[23] The exquisite thing produced, in the completeness and insistence of its object-hood, confirms the closed perfection of the game. The promise of material success in a gaming process seems strange here, for architectural education and practice actually are much more about means than ends. These games do form a

definite knowledge system, but I question their use as a foundation during the vulnerable first exercises of a design education. They are compositional, and their inventors actively or passively propose an armature for later architectural pursuits for which the ideology is put in place in the first years of education.

Exercises that profess, through the actual making of furniture or artifacts that are usually more sculptural than utilitarian, to investigate construction or materiality often arrive at the same conclusion as those that are primarily compositional. They substitute an illusion of craft for the sort of discussion that might confront architecture from the position of our trade's dependence on manufacture. I am not, of course, saying that making is bad for students. But the crafting of beguiling forms avoids the sort of experience that might in fact contribute to an understanding of our art. This sort of work is parenthetical to the crucial interaction of both craft and material with our discipline and its production, while indulging in the pleasure of finishes and the satisfying illusion of labor. Also, it is very literal to presume that action at one scale automatically educates about similar procedures in a very different arena.

Likewise, design teaching that stresses a series of formal transformations and has adopted the loose designation of "process" can move toward a rich methodological discussion but tends toward the sublime vacuum of exponential formal possibilities. If the compositional exercises previously discussed are reductive and propose finally a "solution" that is the inevitable result of limiting possibilities, then "process" arrives at similar form by always expanding them. The operations offer formal variables at every design turn that disengage from signification. The resistance to closure is intense, and the desire for lavish form insistent. "Process" finally puts product first.

> If art contributes to, among other things, the way we view the world and shape social relations, then it does matter whose image of the world it promotes and whose interest it serves. (Haacke 1995)

Whether instructional technique pushes compositional skill through formal exercises, fosters a romantic notion of construction through primarily sculptural production, or arrives at formal entropy through the "exquisite corpse" of "process," the inclination for the beginning design

student is to maintain the implied procedures in his or her later work. It is questionable that compositional exploration most effectively releases creativity justified by an automatic connection between pure form and the demiurge. To contest the intrinsic primacy of the latter as the main focus of an architectural education is necessary. It is indeed true that we make a lot of exciting shapes this way. If shape making were the goal of architectural investigation, then the logic of this approach would be irrefutable, and perhaps appropriate, to a commodity-based culture hungry for new consumable images.

Architectural action is never disengaged from the practices of power or economy—if there is a difference between the two. Although form is the product of any architectural action, study of the role of building in culture seems to indicate that "pure" form is profoundly compromised—by historical understandings, by the facts of contemporary culture, by nostalgia for the future, by the actual physical conditions of the realm that buildings find themselves part of and contribute to, by the perceptions of the collective, by the prescriptions of the powerful, by aesthetic concerns, theoretical concerns, technical concerns, economic concerns, political concerns, environmental concerns, by matters codified in allusion to the body, sexuality, and the city, by the burden of received meanings and their shadowy and shifting nature, by the possibilities and limits of reference, by the magic and the real, by a spectrum of information and sensibility that implies that form is in fact much more than just form, that it is mediated by arguments outside its pristine envelope.

> This is not to say, of course, that art is just advertising, only that art, outside the institutional vitrine of therapeutic mystery, is never *not* advertising and never apolitical. (Hickey 1993, 57)

How does one go about providing access to these arguments, assuming that it is not a good idea to suppose that they will come later, after the student has become comfortable, assuming that this comfort will persist as design dogma? I argue instead for an ontogenetic, not homuncular, beginning design curriculum. This argument presumes an architectural model that is figural. Architecture is seen an automatically engaged expression of societal value and collective sensibility. I urge the revival of some apparently outmoded terms, starting with Dave

Hickey's resuscitation of the issue of *beauty* and adding *analysis, history,* maybe even *realism,* not the "real" called for in current simplistic academic discourse, a *real* defined largely by what it excludes, but in the inclusive interpretation that aligns *realism* to, *neue sachlichkeit* to neorealism and magic realism. In fact, the extraordinary extension of the quotidian as promised in this sort of realism may guide the metamorphosis of the terms and institutions discussed in this chapter. This is not a polemic against either imagination or inspiration. In fact, it is one for them, but as implicitly informed by observation. One cannot "forget" what one does not know. One cannot reconfigure an alien field. And this may be the point, that the role of school in the preparation of young designers to practice our art pertains as much to reconfiguration as to invention. Not that the latter is of no importance to the process of making buildings. Obviously it is central, but creativity implies a nebulous and synthetic process largely relying on techniques of transformation and cross-reference, and given its visceral properties, it remains largely nonquantifiable in the framework of conventional architectural teaching. On the other hand, information—dare I say knowledge—is quantifiable and essential. The gathering of that material is largely a process of inquiry, of learning in the most ordinary of senses occurring simultaneously with the most extraordinary of critical actions.

It seems essential that analysis be engaged in immediately, with rigor, by the beginning student. He or she should start to gather and filter cultural conditions and transform them in the design process. Through this means, rather than through gaming or formal manipulation, the complexity of the field can become digestible. Critical inquiry is necessary in seamless conjunction with, and informing, composition. The simple description of forms and their interrelation should be accompanied by the assessment of their collective implications.[24] Then, interpretation, metamorphosis, and misreading may span the breach between the existing and the proposed, between the learned and the imagined, between the rejection of history and its uncritical acceptance. That the study of the relation of forms both manifests similarities and reveals differences and that these then represent shifting codes seems elementary. That study should accompany the first tentative attempts at design seems desirable. In fact, desire is nurtured through experience. Therefore, the plea here is for a pedagogy that, while striving to inspire, is thorough in its attempt to inform, its encouragement to observe, and its incitement to critique the complex vectors that frame architecture and the information-rich culture that architecture both shapes and serves.

This volume is called *The Discipline of Architecture.* This title joins the strengths both of a discursive practice of architecture and of architectural knowledge. To chart a precarious course between the various manifestations of control and pleasure that *discipline* promises while acknowledging the strategies of power that accompany them seems to be a challenging objective. While discipline may have now merged with the forms of what Pierre Bourdieu defines as "symbolic power" (1994, 266), making difficult any moves toward resistance without contradiction, for this same reason, it ratifies a flexible format for architectural action. To echo Eva Hesse's call for "total risk, freedom, discipline" (1969) seems an aim of both teaching and practicing the engaged act of design. The recognition of the potential and limits of knowledge and of such overlapping terms as politics, liberation, and creativity makes a frame for both pedagogy and production.

> Knowledge and power are simply two sides of the same question: who decides what knowledge is, and who knows what needs to be decided? In the computer age, the question of knowledge is now more than ever a question of government. (Lyotard 1984, 8–9)

Notes

This chapter reconfigures two essays written in 1993, "Against the Homunculus" and "The Intuitional Fallacy," and "Trouble in Paradise," written in 1996. All were published in various conference proceedings. I wish to thank Jennifer Gabrys and Frederick Ilchman for their comments on this text.

1. Here I sample Aldo Rossi, "To what then, could I have aspired in my craft? Certainly, to small things, having seen that the possibility of great ones was historically precluded" (1981, 23).

2. Actually, architecture seems to be turning over wholesale to subcontractors, attorneys, politicians, cultural critics, interior designers, engineers, and consultants of all sorts, the skills and activities that might stem the marginalization about which the profession complains so bitterly.

3. The work of Manfredo Tafuri is a model here as in other parts of this chapter. I have never shared the general American view of his project as too dark to be productive. In fact, I find its relentless assault on easy presumptions and doctrinal closure to be encouraging and to propose a paradigm for discursive practice as such. It needs to be pointed out that in a profession as intellectually insecure as architecture, the apparently complex rendered in overblown prose often substitutes for the rigorous inquisition of the evident that Tafuri embodied. To be what Alice Jardine calls "an expediter of the obvious" (Foster 1987, 151) seems one of the main points of intellectual work.

4. Like kitsch and fine art, for example. Where are the Clement Greenbergs, Andy Warhols, or Jeff Koons of architectural epistemology?

5. Stanton 1991.

6. These sorts of invented dichotomies, while historically linked to our understanding of ourselves—like man versus nature, or fashion versus profundity, or mind versus body, or rational versus lyrical—tend to serve productively only when they are understood as temporary and flawed, to be discarded when they have served their discursive purpose. It would appear that we are stuck for now with these oppositions, if only as intellectual form-work. They pepper the language of those who reject them, either leaving those critics mute after destroying the formats that allow speech or uttering phrases in the very language that is attacked in those phrases. Rather than dismissing them while having to use them in a discursive system in which they are so entrenched that their complete eradication remains unattainable, perhaps it is better to understand them as tools, rigid means to a flexible end: like ideals in a post-teleological society, like Wittgenstein's ladder (see "Works Cited").

7. The assumption seems to be that a redirection of conventional information formats toward "nonhegemonic" sources is adequate. Much current "political" criticism in the academies thrives on a less involved refocusing of scholarship toward these new sources without evident recognition of the issues that are implied by such action. Indeed, some of the strongest current criticism comes from these sources, recognizing the complicity of discourse with power and therefore attempting to reroute the entire direction of that discourse. As Cornel West writes, "The issue here is not simply some sophomoric, moralistic test that surveys the racial biases of the interlocutors in a debate. Rather the point is to engage in a structural and institutional analysis to see *where* the debate is taking place, *why* at this historical moment, and *how* this debate enables or disenables oppressed peoples to exercise their opposition to the hierarchies of power" (Kruger and Mariani 1989, 91). To use Diane Fuss's phrase, "romancing the margins" can either enrich or just marginalize. In fact, much current writing is scathingly dismissive of the very critical venues that would make it viable, labeling those venues as "overintellectual," "formalist," "irrelevant," "jargon heavy," "fashionable," or simply not "real."

8. See Banham 1960; Colquhoun 1981; Rowe 1976; and Rossi 1982; and especially the unrelenting critical studies of Manfredo Tafuri (1976, 1987, 1980) pointing to the contradictions of the conventional avant-garde and toward a less paradoxical, and more effective, successor.

9. "The whole technical power of painting depends on our recovery of what may be called the *innocence of the eye* that is to say, of a sort of childish perception of these flat stains of colour, merely as such, without consciousness of what they signify." From *The Works of John Ruskin* as quoted in Crary 1990, 95.

10. Theory, quite often political in nature, does sometimes accompany design work that is primarily expressionistic, but it usually stays detached, clipped on to form.

11. I use the word *style* in its nineteenth-century sense: referential and morphological.

12. I refer in particular to the ACSA International Conferences in Prague '93, Lisbon '95, Copenhagen '96, and Berlin '97. At each was a much broader cross section of academics from Asia, Europe, Oceania, Africa, and the Americas than the still-substantial pool represented at the many ACSA meetings in the United States I have participated in since 1993 and to which the same comments pertain.

13. At a recent design review, a critic enthusiastically noted that the student work was generated from the study of precedents. In his day such precedents had been Palladio or Aalto—architects. Now they were James Turell, Robert Irwin, or Mary Miss—environmental sculptors. This shift in the field of reference and the uncritical acceptance of this shift by the assembled architectural teachers is indicative.

14. Students often feel that their study is inconsequential to their potential as architects, either too technical or too esoteric, and they feel constrained from doing that which they think will enhance that potential. Student opinion is not always the most accurate barometer of didactic quality. Educational value is not instantly evident, especially to those asked to learn and be judged. Opinion based on immediate perceptions and incomplete data, crossed with emotion, is by nature flawed. On the other hand, the irrelevancies felt by students must indicate some systemic problems in the institution, though these problems may lie well to the side of their perceived sources. Professional resentment often does not take into account the educational role that architectural internship is supposed to play, nor does it recognize the particular and scholastic strengths of the academy.

15. Both clichés are reminiscent of sixties revolutionary politics, when ecstatic and austere arguments previously competed for student sympathy. The juxtaposition of liberation and puritanism appears to be a perpetual paradox in the United States.

16. The verve of the *Futurist Manifesto,* of 1909, became Italian political doctrine after 1922, making Fascism one of the only political movements predicated on aesthetic rhetoric.

17. Stanton 1998a and 1998b.

18. Should an interpretation of Deleuze (1988) have legitimized a strategy for making folded buildings? Does cultural chaos call for its double in architectural form? Such exact transpositions are problematic, but they again confirm that the search for novel form remains a first goal of theory.

19. The reception of Jackson Pollack, the *action* painter, typifies the uncritical American belief in the value of expression and pure image. Stripped of its uncomfortable European ideological charge, and ratified by a culture enthusiastic and naive regarding the complications implicit in such representation, the move to abstraction of the New York school was immediately appropriated by prevalent economic forces. See Stanton 1985.

20. See the neoconservative call for a "return" that in the end rejects the accomplishments—political, philosophical, social—of the last two hundred years. These would place us firmly again in the precise hierarchies and comforting (for some) clarity of prebourgeois culture. See Allan Bloom or William Buckley but also a host of others whose lowest common denominator is the Bushes—father and son.

21. Of course, these are largely available through publications or conference presentations and thus were chosen by the teachers and reflect their preferences over the inclinations of their students.

22. The American scene still clings to neoexpressionism. In a recent "Progressive Architecture Awards," published in *Architecture* 87 (April 1998): 61–93, almost all winning projects continued the faceting, contortion, striation, and biomorphism of late neoexpression. The accompanying text oddly concluded that "design moves away from the big gesture," identifying "subtle shifts" and asking if this was "back to basics." Aaron Betsky's commentary that accompanied the awards may be their most interesting aspect. He argued that "we no longer believe we can save cities . . . through new ways of forming space, solving the need for more or better housing . . . we have little faith anymore in the saving graces of styles." Betsky's insertion of the argument for engagement that I earlier attributed to Aldo Rossi (see note 1) and his insightful if rather hopeless description of the modern condition and its formal discontents as represented by the winners make his piece intriguing. In fact, style seems all powerful in this awards issue. Despite the editorial attempt to keep up, the forms chosen by the jury were quite predictable, as were textual associations to Deleuze and the "dangerous, strange and alien." The presence of Zaha Hadid herself on the jury may explain their preferences, but hers were the strongest critiques of the winning projects, and her discussion of program was the least formal of any on the panel. It seems the jury's Americans (North and Central) were more comfortable with the *style* of their collective choices than Ms. Hadid. Juror Sheila Kennedy remarked, "We looked for things that were deep, being careful not to be fooled by simple, quiet presentations." For her, the simple is deceptive. Noise and formal complexity, with novelty still very much of value, remained preferable criteria.

23. The maintenance, in subsequent architectural education, of an ongoing emphasis on design work primarily at the parti stage indicates a specific game plan. Although often complicating the play by presenting a vocabulary of architectural elements—walls, windows, doors, stairs—as players, these elements are simultaneously dematerialized to the point of intangibility.

24. Here the problem of typology, in the European semiotic sense, taints the discussion. For Americans, typology smacks uncomfortably of rationalism, categorization, systems and logic, of antiquated cosmologies, of pitched roofs and certain Italians, of history itself: all suspect commodities in the New World.