Disciplining Knowledge:
Architecture between Cube and Frame

Michael Stanton

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This group of elements, formed in a regular manner by a discursive prac-
tice, and which are indispensable to the constitution of a science, al-
though 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 hi-
erachies. Its only direction that of gravity, it seems to be free from sym-
bolic 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 personalizes 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 format 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 architec-
tural 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 pos-
sibilities of structure and construction, drawing and presentation, all
finally augmenting the diagram provided by the past and program. Struc-
tural rationalism, art nouveau, and early functionalism provided a fleet-
ful counterpoint. If indeed things were more precise then, the sur-
rounding cultural upheaval couldn’t much longer support a simple
environment for design at the last fin de siècle, and by now the ensu-
ing collapse of master narratives and the proliferation of global media
made any relatively terse definition of architectural knowledge quite im-
possible. 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 sub-
stance of architectural creation 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
disciplines 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 teach-
ing often concern knowledge. The principles of a master or theoretical
group—New Urbanist, Deleuzean, Beaux Arts, phenomenologist—are
passed on to students as formal dogmas without the more thorough
understanding held by those passing them on. Such agendas, while ex-

cplicit in attempts to control and reduce, are fortunately nearly impossi-
bile to fulfill. Knowledge cannot be so easily managed in a data-saturated
environment like the present, for it includes the vast field of informa-
tion 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.

[Architecture problematizes the very differences we depend on for keep-
ing it still and inert. . . . It is the nature of the epistemic to promise pre-

cence and deliver absence. (Ingarden 1992, 56)]

To be anything other than speculative when deliberating architec-
tural knowledge and its transfer seems just as "historically precluded" as
identifying something more precise than its relation to other factors.
Knowledge itself reverberates with such rhetorical volume as to be almost
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, or to surrender it to the questionable uses of others, 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. 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. To avoid evident problems of definition, knowledge will be presented here as material, method, and location, rather than as essence or standard, thus unintentionally 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-operation, 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 intensive 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 banded 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)
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 visibly 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. It seems wise 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 politicslite 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. 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 slant of hand, since one way to avoid the obvious pitfalls of an arcaic 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 'transitive' 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 impurities. Presumably the increasing irreverence 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
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 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 ether 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. It would be repetitious to belabor the obvious problem inherent in easy confusions 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 dogmas. A very precious baby has gone with the rapid bathwater of late modernism, rationalism, and historicist postmodernism.

The tendency to fetishize the unconscious is inherent in the image of unconsciousness itself. (LeDoux 1995, 128)

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, 6), can also foster self-absorption verging on narcissism. The student is hormonculus. 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, narrating 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 arts, 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 serenely 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.” To propose this paradigm in fact to revivify 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.

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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 figurative 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 communicational system. Expressionism marks itself more as an attitude, existing 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 Cacchi, 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 remove the self-proclaimed symbolic silence of the modern movement. Consequently, the alloy of the expressionist and the figurative in postmodern painting proposed a new design aetiology while avoiding the repetition of prevailing forms. 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 neutralized 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. On its surface, it seems antithetical to its immediate predecessor, postmodern pastiche. The “anxiety of influence” was diminished. Also, some architects — Gehry, Zenghelli and Koolhaas with Zaha Hadid, Peter Cook, and others at the Architectural Association — had never endorsed the quickly stale excesses associated with the “historicism” phase of the architectural postmodernism. Many of post-modern’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.\footnote{3\textsuperscript{1}} 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 Scotté 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, postures, trendiness, and unobtrusiveness. 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. Tician 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.\footnote{19}

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 it 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 irrelevancy 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 impressionistic, 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 [we] halve climbed up it," as Wittgenstein urges (Wittgenstein 1961, 113).

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 lost to change. Tenure stewpots, mediocrity is self-perpetuating, and entrenched faculty still toil stubbornly defend fielddoms, along with recycled course syllabi, habits, and tradition—all the innate conservations 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. Sometimes in open defiance of teaching institutions, the profession attempts to influence the definition of architectural knowledge through the tendentious concept 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 obsolete 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-brow pastoral version of "freedom" vie for the hearts and minds of students with more severe "political" postures. A powerful and historically insensitive doctrine backs up the former. Rosseau, Nietzsche, and the early Bauhaus, Marinetti, Klee, Loos and Kraus, Taut, Arp, and Mayakovsky, Duchamp, Cage, Barthes, Deleuze and Guattari, even Tim Leary have made this a familiar and thrillingly 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 de-bunk and it can, of course, devolve as in the case of Marinetti. Certainly the pitfalls of avant-gardes have been amply marked by writers from Tafuri and Habermas to Foster and Janson, 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 axiomatically 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 faruous. I question the aura that appears to accompany intrinsically such endeavors, an aura largely evaporated by recent history while varioulsy invoked by those who believe it still surrounds them.

In the end, the desired "freedom" 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. 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 unblinded from issues or modes of discussion that would continue to interest or inform those outside their immediate penumbras. On the other hand, to assume that architectural thinking is worthless or perma-
nearly 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 a 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 all 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. (Goodman 991, 41)

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 popular exhortations of the nobility of labor, simplicity, and the anti-urban. 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 discourses 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 osphish sidekick, anti-intellectualism?

In the schools, discussion of method, which can be very threatening to entrenched teaching practices and recycle syllabi, is often replaced by doctrinal bickering over the nature and value of what is taught, culminating in pernicious 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 syn-

thesis, the study of the past and of culture, of ideas and aesthetics, the production of original 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. 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 Taurian line between neoconservative strategies of retrieval on one side and the exhausted paradigms 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 rarified 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 split 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 fixed, and finally consumable, despite accompanying arguments that they are just the opposite.
To begin with, there was the scale of the control; it was a question not of counting the body, en masse, "wholes," as if it were a indissociable unity, but of working it "small," individually... In becoming the target for new mechanisms of power, the body is offered up to new forms of knowledge. (Foucault 1979, 151)

A finer focus on the specific example of early design education reveals the criteria that determine the politically charged modes knowl-
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text, 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. 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 as 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. 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 arise 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 insistently. “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 is promoted and whose interest it serves. (Hauser 1993)

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 demure. 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 irresistible, 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 virtue of therapeutic mysteries, is never just advertising and never apolitical. (Hickey 1993, 77)

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 homunculus, 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 *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. 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 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 narrated through experience. There-

fore, 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, 166), making difficult any move toward resistance without contradiction, for this same reason, it ratified a flexible format for architectural action. To echo Eero Saarinen'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. (Leopard 1984, 9-9)

**Notes**

This chapter reconfigures two essays written in 1993, "Against the Homonculus" 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 Aido Rusi, "To what then, could I have aspired in my craft?" Cerrid, to small things, having seen that the possibility of great ones was historically precluded" (1981, 12).

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 seem the marginalization about which the profession complains as bitterly.
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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 evidence that Tafuri embodied. To be what Alice Jobsline calls 'an expenditure of the obvious' (Foner 1987, 153) seems one of the main points of intellectual work.

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


6. These sorts of inverted dichotomies, while historically suited to ease our understanding of ourselves—like man versus nature, or fashion versus profundity, or mind versus body, or rational versus lyrical— tended 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 more often destroying the formations that allow quick or uttering phrases in the very language that is attacked in these phrases. Rather than dismantling 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 more useful to understand them as tools, rigid means in a flexible end like ideism in a post-ideological society; like Wittgenstein's ladder (see 'Works Cited').

7. The assumption seems to be that a redirection of conventional information forms toward 'doctrinaire' sources is adequate. Much current 'postindustrial' criticism in the academy thrives on a less involved refocusing of scholarship toward these new sources without evident recognition of the issues that are implied by such a shift. Indeed, some of the strongest current criticism comes from these sources, recognizing the complicity of discourse with power and therefore attempting to reverse the entire direction of that discourse. As C. S. Lewis writes, "The issue here is not simply a sophomoric, moralistic test that surveys the racial biases of the intellectuals 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 disempowers oppressed people to exercise their opposition in the hierarchies of power" (Kruger and Marians 1989, 93). To use Diane Parnell's phrase, "transforming the margins" can either enrich or just marginalize. In fact, much current writing is scandalously dismissive of the very critical voices that would make it visible, labeling those voices as "overintellectual," "bureaucrat," "ideologue," "jargon heavy," "fashionable," "or simply not "real."

19. The reception of Jackson Pollock, the action painter, typifies the sacrificial 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 abstractions of the New York school was immediately appropriated by prevalent economic forces. See Stenton 1981.

20. See the neoconservative call for a "return" that in the end rejects the accomplishments — political, philosophical, social — of the last two hundred years. There would place us firmly again in the precise hierarchies and comforting (for some) clarity of bourgeois culture. See Allen 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 nonexpressionism. In a recent "Progressive Architecture Awards," published in Architecture 47 (April 1988): 61-93, almost all winning projects continued the faceting, division, stripping, and dehumanization of late modernism. The accompanying text boldly concluded that "design moves away from the big gesture," identifying "table shifts" and asking if this was "back to basics." Aaron Bertusky'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 mass or better housing... we have little faith anymore in the saving graces of styles." Bertusky's inscription of the argument for engagement that I earlier attributed to Aldo Rossi (see note 2) and his insightful if rather hopeless description of the modern condition and its formal discourse 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 mental associations in Dekleva 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 Carlto) were more comfortable with the style of their collective choices than Ms. Hadid. June Sheila Kennedy remarked, "We looked for things that were deep, being careful not to be foiled 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 inscrutability.