I must say that what interests me more is to focus on what the Greeks called *techne*, that is to say, a practical rationality governed by a conscious goal... if one wanted to do a history of architecture, I think that it should be much more along the lines of that general history of the *techne*, rather than the histories of either the exact sciences or the inexact ones.

—Michel Foucault

Art and architecture are practices, not sciences. The constructions of science aspire to universal application. Pictures and buildings need only work where they are.

—Dave Hickey

Architectures are a discipline of circumstance and situation, subject not only to material constraints (limits of form and medium that change only incrementally over time) but also to functional imperatives that differ radically from building to building. These variables are governed by complex political, social, and historical dynamics, and open to continual revision. Almost unique among creative disciplines, architecture’s objective is given from outside. Even in the most ideal of careers, the decisive limits to building programs will be determined by agencies beyond the control of the individual architect. Moreover, architects today practice far from home, and each new site presents unfamiliar conditions. As creative subjects, architects react to these demands, inventing in response to the occasion of the commission, specifying and particularizing a given set of abstract variables. The practice of architecture tends to be messy and inconsistent precisely because it has to negotiate a reality that is itself messy and inconsistent.

This lack of consistency is only partially offset by the tendency of conventional practice to repeat known solutions. Too often, contemporary practice oscillates between mechanical repetition and shallow novelty. Against this landscape of contingency, architectural theory has been called upon to serve a unifying function. Without a larger ideological framework, it is argued, the architect runs the risk of reacting passively to the multiple and often contradictory demands of context, clients, regulating agencies, media, or economics. Architecture apparently needs a grand narrative in order not to be entirely consumed by these small narratives of opportunity and constraint.

In order to legitimate its repetitive procedures, practice appeals to a project: an overarching theoretical construct, defined from somewhere else, and expressed in a language other than practice’s everyday discourse. Situated at a distance from the operational sites of technique, theory stakes a claim on a world of concepts uncontaminated by real world contingencies. The appearance of the architectural treatise in the Renaissance, for example, where normative codes were for the first time in the postclassical era set down in written form, marked a shift from the “ambulant science” of the medieval builder to the regulated culture of the “royal sciences.” A place for abstract thought about architecture, governed by the codes and conventions of discourse, was delineated apart from the building site. More recently, theories of typology, tectonics, or historical precedent have been proposed as a means to regulate architecture’s prolific heterogeneity. Theory’s promise is to make up for what practice lacks: to confer unity on the disparate procedures of design and construction.

The invention of theory and the codification of architecture as a discipline went hand in hand. For a Renaissance theorist such as Leon Battista Alberti, the production of theory had a concrete political end: to incorporate architecture into the circumscribed body of the liberal arts. This could only be accomplished by differentiating architecture from journeymen craft, extending the domain of the royal sciences to architecture. For this codification to be effective, it was necessary to institute an opposition between the speculative and practical aspects of the arts. As Michel de Certeau has observed: “Art is thus a kind of knowledge that operates outside the enlightened discourse it lacks.” The need for something called theory arises from the desire to think the discipline in more abstract terms. A separate space for theory is defined, in order to reflect on the nature of the discipline at a distance, while the possibility of cumulative or incremental change from within is held in check. Theory and practice are, under this formulation, equally rule-bound: theory devoted to the production of rules, practice relegated to the implementation of those same rules. What the royal sciences provide to the arts are “constructed, regulated and thus ‘writable’” systems: organized from without on the basis of that which they themselves lack. The enlightened discourse of theory (scientific, and generalizable) is contrasted to the mechanical techniques of practice. Today this view persists in the form of a mandate for critical practices that would hold the individual instances of practice accountable to ideological criteria.

Today’s conventional view (prevalent, for example, in schools of architecture) understands theory as an abstraction: a set of ideas and concepts independent of any particular material instance. Practice, in turn is understood as the object of theory. In this view, theory tends to envelope and protect practice, while practice excuses theory from the obligation to engage reality. Design is reduced to the implementation of rules set down elsewhere. Ironically, the separation that results is not dissimilar from the very structure of conventional practice supposedly challenged by theory. Conventional practice renounces theory, but in so doing, it simply reiterates unstated theoretical assumptions. It works according to a series of enabling codes, which have been defined without reference to individual practice. These codes are modified in response to circumstance, but never challenged in practice. Theory imposes regulated ideological criteria over the undisciplined heterogeneity of the real, while the
DUMB PRACTICE:
building as a subset/resultant of professional codes and conventions, which are continually deformed to accommodate contingency: a closed figure.

unstated assumptions of conventional practice enforce known solutions and safe repetitions. In both cases, small differences accumulate, but they never add up to make a difference.

But the abstraction of theory from practice is a fiction that can never be sustained. Neither practice nor theory can be reduced to a thing. Theories and practices are both produced in definable spaces, by active, conscious subjects. Theory itself is a practice; that is to say, a set of activities and procedures with a specific language and a known set of protocols. Its terms of discourse are defined by its own history and in relation to other practices through intertextual exchange. Theory's medium is language, its primary activity writing, and its preferred site the academy.

Against this prevailing current, the revision proposed here is double. Practice needs to become more structured, and at the same time more tractable. If conventional practice and theoretically driven critical practices are similarly structured, it cannot be a question of going beyond theory or of leaving theory behind. What is proposed instead is a notion of practice flexible enough to engage the complexity of the real, yet sufficiently secure in its own technical and conceptual bases to go beyond the simple reflection of the real as given. Not a static reflection of concepts defined elsewhere—either the codes of professional practice or the dictates of ideologically driven theory—but a rigorous forward movement, capable of producing new concepts out of the hard logic of architecture's working procedures. Practice needs to find a realistic conceptual basis from which to cultivate meaningful differences. Ironically, practice (usually assumed to be unproblematically identified with reality) will discover new uses for theory only as it moves closer to the complex and problematic character of the real itself.

Hence it is of little use to see theory and practice as competing abstractions, and to argue for one over the other. Intelligent, creative practices—the writing of theory included—are always more than the habitual exercise of rules defined elsewhere. More significantly, practice is not a static construct, but is defined precisely by its movements and trajectories. There is no theory, there is no practice. There are only practices, which consist in action and agency. They unfold in time, and their repetitions are never identical. It is for this reason that the "know-how" of practice (whether of writing or design) is a continual source of innovation and change. Tactical improvisations accumulate over time to produce new models for operation. But these new patterns of operation produced in practice are always conditional. Inasmuch as they derive from experience, they are always open to revision on the basis of new experiences, or new data. Deliberately executed, architecture's procedures are capable of producing systematic thought: serial, precise and clinical; something that resembles theory but will always be marked by the constructive/creative criteria of practice.

Rather than the conventional theory/practice distinction, it might be more useful to distinguish broadly between practices that are primarily hermeneutic—that is, devoted to interpretation and the analysis of representations (law,
history, criticism, psychoanalysis, etc.), and material practices—activities that transform reality by producing new objects or new organizations of matter: engineering, urbanism, ecology, fashion, gardening or architecture. The vector of analysis in hermeneutic practices always points toward the past, whereas material practices analyze the present in order to project transformations into the future. Writing is the primary medium of hermeneutic practices. Material practices, on the other hand, often involve operations of the translation, transposition or transcoding of multiple media. Although they work to transform matter, material practices necessarily work through the intermediary of abstract codes such as projection, notation or calculation. Constantly mixing media in this way, material practices produce new concepts out of the materials and procedures of work itself, and not as a regulating code grafted onto the work from outside. Conceived as a material practice, architecture achieves a practical (and therefore provisional) unity inferred on the basis of its ensemble of procedures, rather than a theoretical unity conferred from without by ideology or discourse.

This is a more uncertain, but also more optimistic, program. The accumulated catalog of architecture's rules and procedures suggests that a partial unity is given at the level of the discipline itself. And yet, unlike the conservative project that would see the structure of the discipline as a limit, historically defined, the pragmatic know-how of technique does not necessarily respect precedent. The criterion of productivity simply bypasses outmoded working strategies, leaving the discipline open to new techniques that may in turn be incorporated into the catalog of architecture's procedures.

Such a notion of practice maintains a deep respect for history, and for architecture's past. Material practices unfold in time, confident in the logical structure of the discipline as a starting point, but never satisfied to simply repeat, or to execute a system of rules defined elsewhere. Architecture's limits are understood pragmatically—as a resource and an opportunity—and not a defining boundary. The practitioner looks for performative multiplicities in the interplay between an open catalog of procedures and a stubbornly indifferent reality. On the other hand, material practices cannot be arbitrary or capricious. They are governed by the hard logic of matter and forces, which behave according to verifiable rules, but without regard for consistency or the conventions of rational expression. Under the pragmatics of practice, the fixed structure of the discipline is neither rejected nor affirmed. It is subject not to critical "interrogations" but to an "erotics of doubt." Refusing the safety of theory's disembodied distance, techniques: architecture as material practice

PRAGMATIC REALISM:
practice as the intersection of architecture's inside and its outside: two open sets overlap to form an indeterminate figure.

practice is not defined by reference to the secure perimeter of a fixed discipline, but is instead marked by the uncertainty of an ever shifting reference in the world itself. This is not a Cartesian doubt that works by process of elimination to arrive at a core of unshakable propositions. Rather, it is tactic for dealing with an imperfect reality with a catalog of tools that is itself always imperfect, or inadequate.

There can be no difference which doesn't make a difference—no difference in abstract truth which does not express itself in a difference of concrete fact, and of conduct consequent upon the fact, imposed on somebody, somehow, somewhere, and somewhen.

—William James

When speaking of techniques of construction, it is important to remember that the architect is not the builder, but the specifier of construction technique.
Architects work with a knowledge of the methods and materials of construction in both design and implementation, but the impact of this knowledge is indirect. What is more significant is the way in which the variables of construction are factored into the calculus of architecture's procedures. This leads away from a theory of "truth to materials" toward an examination of their consequences and experiential effects. The claim, for example, that Le Corbusier, in his Carpenter Center for the Visual Arts (ch. 6) is able to achieve a sense of mobility and lightness with a material that is not in itself intrinsically lightweight turns on a detailed discussion of some of the technical aspects of the building's reinforced concrete construction.

The design history of the Guggenheim Museum is significant in this regard, and was crucial for me in defining the notion of practice outlined here. In 1991, I wrote that Frank Lloyd Wright could "deploy multiple structural principles with effective operational freedom precisely because he was committed to structural rationality as practice, not as project" (ch. 5). What I meant was something like this: early models showed the spiral ramp of the museum propped up on thin columns, a solution clearly at odds with the organic continuity Wright desired. In time, Wright devised an integrated structural solution that did not distinguish between supporting structure and enclosing envelope. While architecturally compelling, this solution proved impractical from a constructional point of view. Wright in the end accepted a solution that, while literally inconsistent with the conceptual unity originally proposed, was itself logical and efficient. What is revealing, and speaks as much to Wright's tactical flexibility as to his intimate knowledge of building technique, is that, while literally segmented, the experience of the building is still one of integrated structure and smooth flow. In practice, the desired continuity is in no way compromised by the apparent structural expedient.

The difference between practice and project is therefore marked by the pragmatic idea of "differences that make a difference." It appeals to concrete differences of performance and behavior and not to abstract relations between ideas and discourses. For Wright, as for most of the architects that interest me, buildings are always more than individual components of a larger project. They are not examples of principles enunciated elsewhere, cases to be tested against the rule of theory's law. Particular instances are met with particular solutions. Consistency and rationality are guaranteed by the hard logic of structure, and by the indifferent behavior of materials themselves. In the case of Wright, the rational behavior of structure is not an absolute fact to be given material expression, but an opportunity and a resource—a point of provisional stability to be freely handled. The measure of Wright's "mastery" of the terms of building is as much his knowledge of where and when to compromise, as in any mythic appeal to integrity and the "truth of materials." This is a way of working that assumes that the ability of architecture to generate perceivable experiences and sensations in the world—practical consequences and effects—is more important than its conformance or nonconformance with some abstract set of theoretical criteria.

To claim that architecture is a material practice, working in and among the world of things—an instrumental practice capable of transforming reality—is not to lose sight of architecture's complicated compromise with techniques of representation. Inasmuch as architects work at a distance from the material reality of their discipline, they necessarily work through the mediation of systems of representation. Architecture itself is marked by this promiscuous mixture of the real and the abstract: at once a collection of activities characterized by a high degree of abstraction, and at the same time directed toward the production of materials and products that are undeniably real. The techniques of representation are never neutral, and architecture's abstract means of imagining and realizing form leave their traces on the work. To understand representation as technique (in Foucault's broader sense of techne) is therefore to pay attention to the paradoxical character of a discipline that operates to organize and transform material reality, but must do so at a distance, and through highly abstract means. To concentrate on the instrumentality of drawing is to pay attention to the complex process of what Robin Evans has called "translations" between drawing and building. It is to understand the way in which the traffic between geometry and construction is fundamental to the integration of drawing practice into design work.

The characterization of architecture as a material practice deserves one final qualification. These translations between drawing and building today take place within a larger flow of images that circulate in complex and uncontrollable ways. Architecture's culture of instrumental representations cannot help but be affected by its intersection with this dominant image culture. Architecture has always maintained a mechanism of explanation, promotion and normative description alongside material production: treatises, catalogs, journals, conferences and articles. In the past this was related to pedagogy and the dissemination of professional information. Today there is an accelerated, spiraling motion
whereby materials from outside architecture (most notably, the immaterial effects of film, media, or graphic design) have been cycled back through the discipline to enlarge architecture's catalog of available techniques. This image culture belongs to the new ways of thinking and seeing that have emerged with modernity: shifting mental schemas that mark our uncertain position in the modern world, and force us to see how the practice of architecture has been constantly revised by the complex currents of twentieth-century thought. If I maintain a provisional distinction between the instrumental consequences of representation within the culture of architecture, and architecture's complex interplay with social and semantic representations, it is not to ignore the moments of intersection and overlap. I propose a close attention to the material effects and worldly consequences of all of architecture's matter—material or immaterial, semantic or otherwise—while maintaining a strict indifference as to the origin of those effects.

trajectories

And indeed, it is easier to walk with music than without it. Of course, it is just as easy to walk while talking up a storm, when the act of walking disappears from our consciousness.

—Viktor Shklovsky

Michel de Certeau employs the figure of the walker in the city to describe the errant trajectories of everyday practices among the systematic space of the proper. For de Certeau, "the geometrical space of urbanists and architects seems to have the status of a 'proper meaning' constructed by the grammarians and linguists in order to have a normal and normative level to which they can compare the drifting of 'figurative' language." Within his schema, the wandering course of the pedestrian is compared to the enunciative function in language: "The act of walking is to the urban system what the speech act is to language or to statements uttered." This free movement that de Certeau describes ("a Brownian variability of directions," in Deleuze and Guattari) is guaranteed by the tactical improvisations of multiple individuals. De Certeau understood that there can never be a perfect correspondence between the regulated geometrical structure of the planned city and the unruly practices it supports. The city's inhabitants are always ready to take advantage of this mismatch between structure and performance. This in turn suggests that the control exercised by any disciplinary regime can never be total. Resistance will find other pathways around (or under, or through) the constraints imposed from outside: pathways that lead away from transgression, catastrophic overthrow, withdrawal or retreat. De Certeau describes a series of "tricky and stubborn procedures that elude discipline without being outside the field in which it is exercised." He has confidence that there will always exist fissures and cracks that provide openings for tactical reworkings. Making opportunistic use of these footholds, the creativity of everyday practices can often outwit the rigid structures of imposed order, or out-maneuver the weighty apparatus of institutional control: "The long poem of walking manipulates spatial organizations, no matter how panoptic they may be: it is neither foreign to them (it can only take place within them) nor in conformity with them (it does not receive its identity from them). It creates shadows and ambiguities within them."

What is not immediately obvious in de Certeau's writings is a subtext that appears to align the geometrical space of the planned city with the systematic constructs of theory. A concept of theory as regulated space (oblivious to the complex babble of enunciative practices taking place around it) precedes and undergirds his description of the regulated space of the planned city, indifferent to the multiple trajectories unfolding in its spaces. The idealized constructions of theory mirror the panoptic spaces of geometrical urban planning: "Within this ensemble," de Certeau writes, "I shall try and locate the practices that are foreign to the 'geometrical' or 'geographic' space of visual, panoptic or theoretical constructions." And so, by analogy, just as the active citizen might manipulate and refigure the space of the city—which is given to her from without—so too creative intellectual operators can put into play the rigid codes of inherited ideological systems.

Two important senses of the word practice intersect here: practice designating the collective and peripatetic improvisations of multiple inhabitants in the city connects to practice as the creative exercise of an intellectual discipline by an individual. De Certeau's cunning optimism suggests a notion of performative practice, capable of continually reworking the limits of a discipline from within. He offers a way out of the false opposition between the pessimistic vision of practice as mechanical repetition (agent of institutional authority), and the neo-avant-garde position of transgression. His view affirms that practices always unfold in time, moving on multiple and undisciplined trajectories.
At the same time it is a realistic vision, recognizing that it is impossible to effectively operate outside of any discipline’s “field of operations.” Just as the walker in the city produces scandalous figures out of the geometric space of the city, there exist tactical practices—nomad practices of writing, thinking or acting—that are capable of manipulating and reforming theory’s prescriptive spaces. When de Certeau speaks, in this context of an “opaque and blind mobility” inserted into the “clear text of the planned and readable city,” I would suggest that it could also be read as a way to practice theory, a call for mobile and improper reworkings of the “clear text” of given theoretical formulations. The moment of dislocation—the itinerant path of the walker in the city, or the nomad thinker in theory—is precisely that which resists systematization.\textsuperscript{15} It cannot be factored, it cannot be regulated. It makes room for the tactical improvisations of practices.

The essays in this volume were written following the pathways unfolded in the course of working.\textsuperscript{16} I wanted to trace the emergence of ideas in and through the materials and procedures of the architectural work itself, and not as a legitimation from outside, in the form of written codes. Architecture, in my view, is not usefully understood as “built discourse.” Instead, as a material practice, it is capable of producing ideas and effects through the volatile medium of artifacts and images rather than exclusively through the mediation of language. It works by means of a necessarily mixed assemblage of procedures, and requires multiple tactics of exposition. Hence the purpose of writing is not so much to explain, or to justify a particular work or working method (situating writing prior to, or above drawing or building, as activities proper to architecture) as it is a continual process of clarification. The activity of writing for me is part of the practice of architecture: something that happens alongside drawing, building, or teaching.

But the writing of an architect differs in significant ways from the writing of a historian or a scholar. In part, it is marked by the technical and instrumental concerns of a working architect, a kind of “shop talk”: comparing notes and testing techniques, finding out what works and what doesn’t work, constantly on the lookout for the next advance. To define these essays as part of an architectural practice is to recognize and accept the mixed character of architecture’s procedures. To conceive this work as a practice is to work from examples, and not principles. It necessitates a continual reference to specific instances of buildings, drawings, or texts. But more significantly, it also means resisting the temptation to generalize the results in the form of a project. Theory needs a project: a static construct, a persistent template of beliefs against which individual actions are compared, and tested for conformance. In contrast, practices imply a shift to performance, paying attention to consequences and effects. Not what a building, a text or a drawing means, but what it can do: how it operates in—and on—the world.