

Modernity Without Modernity

BRENDAN D. MORAN
Syracuse University

INTRODUCTION

As events from the second half of the twentieth century are recounted by architectural educators—a task that will likely need to be continually re-engineered throughout the next century, so as to register emergent perspectives on how a present moment might yield a future shaped by the past—a simple question will almost certainly arise: how scientific is our understanding of our own becoming? The simplicity of this question, however, belies a hidden complexity, entailing reflection on how self-conscious we have been and yet can be, regarding our rendering as narrative the events relative to such a reckoning. More specifically, the matter of whether we are becoming or have become self-reflexive enough about “modernity,” be it architectural or not, will no doubt arise; as will the question of whether we have produced progressively more accurate and subtle models of interconnectivity among our ideas and actions, as well as our vocabulary for describing them.

To put this all another way, if in the West an epoch-changing turn away from religion and toward science began with the Enlightenment, have we become more savvy about the pitfalls of the particular will to science entailed by such a shift, especially in relation to our understanding of man’s sustaining environment Earth? From this vantage, any talk of a second modernity must grapple with how successful (or not) we feel we were during our previous incarnation, in particular as regards the establishing of methods relevant for determining those causal relationships at stake in the ongoing use and management of our home planet. While I

am obviously implicating our current concern with sustainability in architecture, I am trying to do so without using that particular word, which increasingly forecloses on over overlooks how an earlier modernity failed to successfully address such an important matter.

SCIENCE

To begin to interrogate architecture’s particular will to science, I would like to suggest, following a number of philosophers of science—ranging from Karl Popper to Michael Polyani to Thomas Kuhn to Imre Lakatos to Bruno Latour on to Ilya Prigogine & Isabelle Stengers—that scientific activity is not intrinsically different from other types of human action. Importantly, neither is architecture. Under the rubrics of “science” and “architecture,” I am including everyday professional actions yet specifically referring to research—experiments and designing—as well as more theoretical explorations. Moreover, to be as up front as possible, I am implicating the widest scope encompassed by such activity, especially what used to be called architectural science, those speculative attempts to be scientific about design as a form of knowledge that were initiated during our first modernity.

To expand upon this, science does not model the world in its complexity any “better” than any other form of knowledge; and it has no particular access to “truth” when compared to other activities, such as making a painting, a musical composition, or a building. In creative, environmentally transformative works such as these, truth (if it relates to these things at all, and I think it does) comes in the form

of lived experience, often of a repetitive nature, like listening to a performance of Gustav Mahler's Eighth Symphony, watching a screening of Roman Polanski's *Chinatown*, or entering and using the New York Public Library's Stephen A. Schwarzman building on Fifth Avenue in New York City. Life is after all a series of repetitive, seasonal repetitions, no two exactly alike.

This highlighting of science's similarity to other forms of knowledge—and its potentially analogous relation to architecture—might seem obvious, or even trivial, but not from a certain perspective. Let us take, for an instance, the recently proffered idea of intelligent design, which though viewed by some as creationism by another name, is defended by its advocates as a scientific theory no more or less accurate, i.e., provable, than evolution. Resolving the discrepancies this involves depends upon the inherent inability to distinguish between "true" and "false" science. Furthermore, the challenge we are faced with in adjudicating this dilemma, in choosing between two such distinct belief systems, stems from assuming whether it is proper to link progress in science to political progressiveness. It isn't; politics isn't science, but they are both in the world, often together, side by side.

While Popper established falsification as legitimate grounds for determining what sciences are false back in the 1930s, more recently the certainty of such theoretical grounds have been seriously shaken. This is largely due to the rise of Science Studies (or the sociology of scientific knowledge), an increasingly large and formative body of academic research that proves beyond the shadow of a doubt that scientific discoveries do not occur in a vacuum, or rather, not in a social vacuum—far from it. Early Science Studies located the determining factors as to what made for good science outside the field of scientific inquiry. This made falsification easier, but didn't help much with the harder cases pertaining to whether sciences that couldn't be falsified were necessarily true. Moreover, it rendered questions of truth (or the accuracy of theoretical models) inadmissible or non-determining from a sociological viewpoint. Ultimately, by generating a paradox whereby science is simultaneously powerless (because it cannot determine its own future, due to the importance of outside determining factors) and powerful (because proper science is the best model of reality yet devised by human kind), such model-

ing of science began to seem downright unscientific, and at the very least not helpful.

Since then, what has been found to be helpful is understanding most of our social as well as our disciplinary structures to be constructed, and nevertheless agreeing to muddle through without knowing whether a unified theory of science were we to have one would be true, or whether in a discipline everything is somehow consistently related to everything else. Returning to the case of intelligent design, without a research project for testing the veracity of evolution or intelligent design—and cracking the code of DNA is decidedly not such a project—we won't have a means of knowing the truth about them. What I am suggesting, then, is that when talk turns to a second modernity, an improved or "better" understanding of modernity, one inherently reanimates aspects of the recent history of the history of science. Thus we enter into a kind of diabolical repetition, when what we really need I would argue is creative invention of an entirely different sort.

In order to conjure up such a thing, and ultimately apply it to architectural education, we might interrogate our field's understanding of the particular truth of its first modernity. There are many claims as to when architecture first became modern: Tafuri attributes it to Brunelleschi's dialectical linkage of the space of the medieval city and the trans-historical symbolic referentiality of an architectural ensemble in Florence; Colomina locates it in the emergence of print media, and in technologies and discourses of publication; while Eisenman finds it in Le Corbusier's *object type* of the Maison Domino.¹ While all are reasonable, none quite do justice to the truth or falsehood of architectural knowledge from a scientific vantage point. But maybe this is the wrong way into the problem. What of the truths of modernization, or of modernity, and our self-reflexivity toward them? In particular, what of the truth of architecture's second modernity, in which the architectural appears to have migrated from being lodged primarily in new styles, white buildings and utopian visions, instead to be found in often free-floating associations with network flows and feedback loops, computer architectures, and myriad de-, dis- and re-spatializations?

I would argue it is here Science Studies offers architecture some assistance. What it posits, helpfully, is that science as a social practice can harness the

“natural” or “material” world toward instrumental ends differently than can other belief systems, yet as a belief system science acquires its authority to do so in precisely the same manner other belief systems do. Latour in particular has modeled the encounters of science with the forces of non-science, through recognition of a type of physical artifact called the *immutable mobile*. For Latour, this term designates a non-textual document or potential evidentiary artifact (chart, graph, drawing, blueprint, etc.), one which allows for the socially innovative to be recognized as well as conceptualized. An immutable mobile is something like a text, yet also something much more like a diagram; it can be a spreadsheet, a set of working drawings, a rendered perspective, a sketch or a physical model of a building, all of which have the unique quality of being able to, in Latour’s words, generate “a regular avenue through space.” It is here that Latour’s concept is simultaneously philosophical (allowing us to access thought), technical (allowing us more precise access to and action within the world), and importantly, architectural (allowing us to imagine practices productive of new spaces).

Immutable mobiles connect places far away to bodies near and dear, and do so in ways that can be seen, by everyone, in a relatively permanent, dare I say objective, manner. They partake and offer up optical consistency, constructing a shared visual culture across space and time and co-mixing distinct social types often impervious to each other. Perhaps most importantly, they form the meeting grounds for fantasy and truth, two always-already motivated regimes that too often, especially in science (and I would conjecture, nowadays in architecture as well), are kept distinct. In particular, perspective drawing, in its role as a generally understood and universal language of visualization, from the Renaissance to contemporary computer renderings, provides a common meeting ground, a determinate space of juxtaposition, for both fantastical representations and delegates from the known world, inventing if you will a world not near, not distant, but perhaps more compelling than both extremes for being able to bridge them.

INVENTION

While for some modernity, even modernism, was a productive invention along the lines of perspective—and perspective was a productive invention

constituent of first modernity—it seems important to ask whether it was really the kind of invention we actually needed, or desired; more scandalously, we could ask if it was really an invention at all. If the world of belief systems, scientific and not, linked by immutable mobiles was decidedly a newly modern one—for Latour this is a given—certain things clearly appear to be the causal crux of that modernity’s emergence: the introduction of the printing press and capitalist markets, and increased ocean travel chief among them. These together produced “shifts from the medium to the message,” Latour claims, but with a kind of lag, in which “[a] new interest in ‘Truth’ does not come from a new vision, but from the same old vision applying itself to new visible objects that mobilize space and time differently.” This, of course is the question of modernism, and also a question for modernity: how are new aesthetic and technological practices forged, perhaps even invented, through dynamic confluences? More to the point, has a second round of intrinsically different confluences produced new practices, superseding earlier ones?

The answer appears to be no, although one could quibble with this (I won’t here). Save perhaps for one particular aspect of society: the reproduction of citizen experts, or, for lack of a better word, professionals—professional scientists, professional architects. As the final section of this essay will take up, we educate and train future professionals, we do not invent them. We have not always educated and trained them the same way, though; hence we might yet learn to do so differently, and it is in this regard that a second modernity could be fostered. What if we were to re-imagine social reproduction as a process of modernity that encompassed invention in inventive new ways.

For Latour, and for his one-time collaborator Isabelle Stengers, invention for modern science is the most supremely important trait. I am referring here to Stengers masterful book *The Invention of Modern Science*, in which she suggests the immutable mutable connected to laboratory experiment as a repetitious event fostered modern science’s herculean inventiveness. For her, this type of invention is not, however, a trait that stems from the individual, rather one that arises from collective activity, just as social reproduction is not primarily the conceiving of individual offspring but their subjectivization, i.e., the collective and collectively achieved

processes whereby human subjects enter into communicative and combative relations with other like entities. Invention as a trait of science arises not “outside” of its social construction—as it does in certain narratives, for example the “Eureka” moment of spilling water from the bath (Archimedes’ displacement “invention”) or dreaming of rings of molecules (Kekule’s Benzene “invention”)—but rather within and through settings of socialization and sociability.

For Stengers, science became modern science, a project distinctly *of* modernity and hence of modernisms, through the invention of the experiment—not as the location of proof but instead as the very grounds of potential social choices. From the perspective of a belief system, newness—in the form of new paradigms, new world views and new orders, as well as new aesthetic regimes—imposes a choice on a community. By counterinterpreting normative and widely held beliefs, one individual (“inventor”) appears to have hitched the becoming of a new collectivity to the yoke of a new belief system; yet the more important invention at work, *pace* Latour, is the invention of new ways to legislate, i.e., to extend use and achieve consensus among collectives. Science and advanced technology employed as a bludgeon pounding on existing belief systems, merely because it is felt (by some) to be the best model of how the world actually is or should one day be, is in fact not the truth value one would be well advised to associate with modernity, or modernism.

What Stengers is basically arguing against, is viewing science’s modernity as based on a mobilization of science in a manner that would correspond to what Deleuze and Guattari label a “war machine.” That is, as a force of authority that vanquishes other forces possessing their own will to authority. Instead, Stengers argues that the inventiveness of modern science—for her, a “constantly becoming,” constantly re-invented science—holds the key to the particularly modern truths it offers up to society. Rather than see science as an objective description, she prefers to look at it as merely another, extremely useful belief system, one that has been particularly powerful when its truths are framed as truths pertaining to *what* to do, and *toward what ends*?

What Stengers pinpoints, then, is the tendency of a particularly modernist aspiration for science to see the apotheosis of its best ideas only in the vanquishing of other belief systems, a tack she finds

not very inventive, to say the least. And it is here where I think the discourse of second modernity—at least as it relates to architecture and the architectural—can garnish an insight from Science Studies. What would it mean to divest ourselves of this aspiration, or the need to employ it in certain ways? Could we generate, rather than a second modernity, instead a modernity without modernity, a new orientation without this particular variety of modernity? For me, modernity without modernity suggests an architectural modernity without a scientific will to power, one set on invention at all costs. This particular modernity might be—and might have been all along—the best that modernity has to offer, first or second order. It seems to me, however, that this is not what most contemporary interest in a second modernity in and out of architecture takes up. This is especially true if the term is applied, as Ulrich Beck and others do, to the postwar period, the moment of the rise in America and elsewhere of the military-industrial-educational complex. To argue that cybernetics and feedback loops are the legitimate forerunners of contemporary developments in computer architectures and computer-generated architectures, without attending to the particular politics that surround military research and its role in these pre-histories of the present, is literally to go back to the future.

Instead, a will to community, or at least a will for science (and architecture) to commune, through consensus and dissensus, with other belief systems, would be a far more useful invention. And by this I am not advocating a return to 1960s conceptions of community design and other previously attempted forms of participatory democracy, directed at concern with the status and future of the profession and its disciplinary relevance, at least not as a paradigm to be copied. Rather, I would like to propose that the burgeoning open source culture may yet generate a stage or a platform for the invention of new means to challenge the state apparatuses of institutional conflicts supporting science as a war machine.

A SCIENTIFIC EDUCATION

Yet this I suspect will only happen if we attend to one particular aspect of architecture, which in fact in North America is so inexorably tied to conceptions of modern science as to go unnoticed and unremarked: the modernity of architectural education. It is an open question as to precisely when Ameri-

can architectural education become modern. Was it when American universities increasingly welcomed architectural instruction into its ranks, simultaneously with the emergence of modern professions during the last two decades of the 19th century? Or when the importation of pedagogical exercises and practices from the *Ecole des Beaux Arts* in Paris picked up steam, at the turn of the century? Perhaps it was with the establishing of the Association of Collegiate Schools of Architecture around the start of WWI, or maybe with the later importation of Bauhaus instructional principles during the interwar era? I would argue it was none of these junctures, but instead the emulation of German technical training as the ordinary model for architecture education in America. Through this particular instituting of design activity and creative explorations within an ostensibly scientific milieu, architecture was inscribed within a will to science fostered through the expansion of American education by founding numerous agricultural and mechanical institutes around the time of the Civil War. Despite various significant events that have transpired since, this early linkage clearly has shaped ongoing attempts to modernize pedagogical practices, for despite relocations, revampings and revolutions since, we have not quite jettisoned certain ties that bind.

In an essay entitled "Visualization and Cognition," Latour notes that education over the long haul is constituted not by the inculcating of mental practices but of external production and recording protocols, conditioning citizen students to write papers with footnotes as scholarship, to write up scientific experiments in paper form as research, and, specifically in architecture, to make drawings and models of "designs."² Mark Wigley has recently suggested that architects are essentially sophisticated image processing machines, social types who after all make certain kinds of immutable mobiles, namely those that can ultimately produce buildings and "projects."³ If the line of thought I have been mapping through the sequential sections of this paper are pursued, linking science through invention to education, as a primary movement inherent to modernization, perhaps through it we can escape a certain repetition.

Before the *Beaux-Arts* model of instruction was adopted in most American schools, during the last decade of the nineteenth and first decade of the twentieth century, design was introduced at the end of a student's training—along with architectur-

al history, and theory (which pretty much was design theory). Earlier years of instruction consisted almost exclusively of technical training, and echoed the norms of engineering education, which offered the practical skills needed to increase American agricultural and industrial productivity. Due to this, applied fields expanded at a far greater rate than did other areas of the university, moving American education further away from earlier models based on study of the classics, hermeneutic methods, and what were basically the humanities (human arts). Yet a technical education is not identical to an education in the art of science; the latter involves both the discovery of knowledge and application of it to particular technical problems, whereas the former generally focuses on only the solving of technical problems. Taking a cue from Stengers, we might note that technical education does not readily provide for or allow for invention, the invention she feels is inimical to modern science. By only applying, toward solving practical problems, what science has discovered or already invented, we fail to stage or model the processes of inventing. Rather than inventing more science, we invent applications. But where is the truth in this?

Design is that component of architectural education, which once allowed into the academy began to wheedle and wend its way into the waft and weave of institutional logics. In this way, it ultimately offers a way out of the impasse between a technical training and an inventive scientific education. We might be tempted to say that if imported *Beaux-Arts* pedagogical methods subsequently nourished the art of architecture, then the subsequent rise of design, and with it reflection on design as a practice, design methods and theories of design instruction—all primarily cold-war, pre 1968 developments—nourished the science of architecture. This is no surprise, given this moment was the heyday of government funding of scientific research in America, from "Big Science" to individual projects alike. But wouldn't we be repeating an oft tread path here, succumbing to that "first" modernity, in which we nestle a will to science within design, at the heart of architectural education's flourishing in America?

What I am suggesting instead, regarding what a true second modernity attuned to architecture's specific "truths" might yet encompass, is a reconsideration of the nature, importance and role of design. For one thing, it might encompass putting

aside, or seriously questioning, the relationship of modernity to professionalization, and thus architectural education's responsibility to the profession of architecture. By self-critically being self-reflexive about the link between architectural education and professional formation, we might enable the architectural to have a lot more to do with life, and a lot more to do period, during a second modernity yet-to-come. As Stengers suggests, invention as a choice does not lobby for one particular interest group, "scientists" or "architects" or whomever; instead, it poses a question for society, in which scientists (or architects) must be chosen, by a force beyond science, and perhaps, beyond modernity. Good inventions, worthwhile and useful inventions generally prosper, primarily because of the opportunities they make available; they don't prosper primarily because those backing them have the power to legislate their importance.

My goal here has not been to come up with answers, but rather with questions. Is architectural education too complacently going along with what is more and more becoming— unthinkingly, I believe, and unwittingly—a second modernity far too much like our supposed first? I fear so, although I can't say for certain. Maybe we should entertain some new choices, or put them on the ballot for election; perhaps we should invent new experiments involving what design can do, or new parameters for such invention (and here I most assuredly am not advocating invention of new forms, or new digitally parametric means for generating form). Maybe we should start by replacing our spatial obsession with *design*, with the far more useful rubric *redesign*, or *re(lationship) design*, for it is not design but its relationship to other ways of making and knowing that our students most need to learn, if they want to work with others in and on a world that has always already has been heading in certain directions. Perhaps then we will recognize that there is little need for new building forms, but rather a strong and constant desire for building new models of informed engagement with architecture's others. Maybe such building will once again move the world in directions worth striving towards; who knows, maybe even towards a better modernity.

ENDNOTES

1 Manfredo Tafuri, *History and Theories of Architecture* (London: Granda, 1980), 17-18; Beatriz Colomina, "On Architecture, Production and Reproduc-

tion," *ArchitectuReProduction: Revisions 2* (New York: Princeton Architectural Press, 1988), 6-22; Peter Eisenman, "Aspects of Modernism: Maison Dom-ino and the Self-Referential Sign," *Oppositions* 15/16 (Winter/Spring 1979), 119-128.

2 Latour's article "Visualization and Cognition: Drawing Things Together."

3 Mark Wigley, "The Hyper-Architecture of Desire," *Constant's New Babylon* (Rotterdam: 010 Publishers, 1998), 8-41.