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On the Practices of Representing and Knowing Architecture

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Designing Architecture

Designing architecture is a unique epistemological practice, a unique way of knowing resulting from a complex process of conceptual negotiations. Architects not only solve technical problems and create aesthetic objects but facilitate a process in which visions of a building acquire a particular symbolic or cultural sense. While working on a project, a designer must develop multiple architectural proposals, understand the complexity of issues they manifest, and negotiate them with the parties involved in the project — clients, local authorities, planners, consultants, contractors, bankers, and many others. A designer produces these versions in order to understand what kind of a design problem he or she is actually dealing with.[1] Understanding how a building functions as a cultural artifact is esoteric when compared to, say, the scientific understanding of its physical properties. Unlike, for example, the universality of the principles of physics, a building's symbolic performance is inseparable from time and place. In the design process, the symbolic dimension of architecture is envisioned with the help of models of inhabited reality created in one's imagination or of images retrieved from memory. These conceptual negotiations involve the exchange between different modes of thought and points of view — between verbal and visual interpretations, for example, or between universal scien-

tific laws and the kind of understanding that a particular design process reveals. Everything that an architect produces — conceptual sketches, physical models, functional diagrams, technical drawings, cost analysis spreadsheets, and verbal explanations — supports this process of negotiation. In this way, by testing the spatial and material attributes of architecture, an architect explores the complexity of issues and forces that shape a prospective building.[2] Thus the epistemological uniqueness of designing lies in the double character of this process, of simultaneously defining and resolving the design task. Because of its dual nature, this process is clearly different from that of problem solving, which, even at its most inventive, is based on a scientific paradigm — an assumption that a task becomes a problem that can be resolved when its objectives and limitations are well defined. In contrast, it is impossible to unequivocally define symbolic objectives of architecture and ways of evaluating the symbolic correctness of a particular solution. One could also say that the creative process of designing architecture is similar to writing a novel or painting a picture because all involve revising in the refinement of an idea in one's mind. Yet physical buildings and concepts for prospective architecture relate differently to the material world, everyday life, and culture than do the works of literature or studio arts. First, architecture engages all that surrounds us — all those attributes of our material, social, and political environments that frame everyday life. As a result, the best architecture, without focusing attention on a building, reveals complexity of meanings within those contexts. Second, the architectural design process crystallizes the designer's vision and understanding of reality for all the people involved in the project. Consequently, architects give form to multiple and frequently conflicting or unrealized thoughts concerning reality and, in this way, make them conceptually accessible. Later, when the building exists physically, it manifests a symbolic environment distilled from the ideas, visions, and rationales admitted by the design process. A building's form and the way it functions embody these resulting symbolic concepts of reality.

Such a process is essential for the way buildings are designed. However, only the systematic and purely rational part of the design process has been epistemologically codified, as, for example, the technical knowledge of building systems, taxonomy of architectural styles, or functional typology. All that is really specific to architectural design thought — the

mode of interacting with architectural visions that crystallizes concepts of reality—falls outside of established disciplinary categories. Any knowledge, including the traditional history of architecture, that views a building as an unavoidable result of physical or social determinants—for example, climate, dominant political or social forces, or the wishes of a particular client—excludes from its field the symbolically dynamic process of conceptual negotiations I have outlined.

I contend that the discipline of architecture should focus on what is specific to architectural thought: those processes through which architecture shapes understanding of reality. The issue of representation is essential for this kind of epistemological focus. The prevalent understanding of representation in architectural education and profession is still grounded in Aristotle's concept of representation as the imitation of nature and Plato's process of doubling (Aristotle 1984, 194a, 199a; Plato 1924, 214–15). Generally speaking, such traditional approaches assume that as objects of knowing, representation and reality stand in opposition. Thus reality is only that which exists objectively, unaffected by the act of knowing it. Representation, on the other hand, includes everything people construct to be known as a visual record or figurative manifestation of that reality. This opposition reflects the desire for a clear and stable distinction between what actually exists and what was made to appear. Within this approach, architects usually reduce the definition of representation to the creation of such visual forms as drawings or models that selectively double or imitate the physical reality of a building.[3] I would like to move beyond this traditional view to define representation as a culture-specific and dynamic process of establishing the relationships between reality and the signs created to symbolize this reality. In this process, reality becomes *thinkable,* and its meanings are symbolically assigned. That is, through representation the symbolic attributes and structures of a particular concept of reality are rendered accessible to human thought. Although my emphasis is on the visual and experiential aspects of these processes as they occur in architecture, it is noteworthy that Kenneth Surin, Raymond Williams, and Edward Said have already discussed the same issues from a literary perspective, demonstrating that the thinkability of concepts and structuring of feelings, attitudes, and references are essential for the cultural and social specificity of thought.[4] Designing a building involves similar processes

of establishing sense in a prospective reality of architecture, but these processes rely only in part on verbal negotiations. In general, buildings do not communicate but represent, a distinction essential to the study of architectural specificity of thought.[5] Architecture represents rather than communicates because the symbolic reality that a building manifests becomes perceivable, but its understanding never reaches the stability of an unequivocal interpretation. This representational process is far more complex and dynamic than the process of sending, preserving, retrieving, and decoding well-formed messages. This is also why, although I see significatory practices as central to conceptualizing and knowing architecture, my approach differs from that of architectural structuralists such as Umberto Eco or Juan Pablo Bonta.[6]

The notion that architecture helps crystallize mental concepts of reality may seem esoteric, but the symbolic practices revolving around this phenomenon are omnipresent in our life, as I will discuss in terms of three practices of knowing typical of architecture: first, when a person interacts with an existing building; second, when knowledge of a building is disseminated through pictures and words; and third, when a building's vision is constructed for commercial reasons. The major objective of my strategy is to identify how these practices constitute knowledge of a building as a symbolic site—which attributes of a building are foregrounded, how knowing a building defines the relationship between who knows and what is known, and how the truthfulness of this knowledge is ensured.

Existing Buildings

Similarly to Jean Baudrillard's description of architecture as that "in which the space is the thought itself" (1999, 32), I assert that a piece of architecture is the *space of representation*—a material environment constructed to interact with human thoughts in such a way that the concepts of reality that the building embodies acquire a degree of tactility.[7] Buildings and cities represent when they serve as repositories of materialized concepts that manifest how people have defined themselves in their lived reality. Bricks and stones last longer than human life, and they transmit these concepts of reality across generations. In this way, a building becomes a repository of cultural memory and helps to expand

the sense of reality beyond the here and now. Any piece of architecture functions in this manner when its value is found in the interconnections it establishes with other buildings, practices of everyday life, social structures, attributes of the natural environment, or metaphysical concepts, although many aspects of these relationships may be perceivable only to people identifying with the local culture(s). This process of establishing a symbolic network of relationships can be viewed as analogous to what Jean-François Lyotard calls the emergence of representational consciousness. He observes that the viewer's accumulation of experiences and the delay of the immediacy of reaction to what is being perceived at a particular moment show "how perception stops being 'pure', i.e., instantaneous, and how representational consciousness can be born of this reflection (in the optical sense), of this 'echo,' of the influx on the set of other possible — but currently ignored — paths which form memory" (1991, 42). Through this process, according to Lyotard, human thoughts establish networks of relationships within functioning concepts of reality.

The history of architecture and urban design provides many examples of how public buildings and urban places have given form to and transmitted through time concepts of social structures and value systems. Streets or places of everyday habitation and work, although not fitting into the traditional taxonomy of high architectural styles, provide equally rich symbolic environments.[8] To see how architecture operates as the space of representation, one has to examine the relationship between concepts of reality and the material building itself.

Buildings, unlike scholarly treatises or the rules of law, do not make arguments. As the space of representation, a building only foregrounds concepts of reality and implies modes of thought and perception. For example, it invites a tacit dialogue between old and new, or between a culturally shared and a personal sense of reality. Whatever exists or happens in a building, we interact with it symbolically. Any building admits various and even conflicting concepts of reality. Consider, for example, places where different cultures have coexisted for ages, temples that have been absorbed by different religions, or the recent phenomenon of converting old industrial buildings into public spaces. Such hybridity of meanings is possible because concepts of reality and physical

forms of buildings, although symbolically related, are never fully codependent; they are differently constructed. Concepts of reality ultimately aim at clarity and consistency, and if they reach this goal, they result in a verbally organized system of thought, such as laws of physics or principles of theology. As such, these systematic models can be used to unequivocally explain reality; physics, for example, can explain the rationale behind organization of structural members of a building, and theology can be used to interpret the meanings of religious artifacts in a temple. A building, on the other hand, though physically fixed and permanent, remains open to interpretation as a symbolic environment. The materiality of architecture, its construction of space and light, how a building's form implies certain interrelationships among people or metaphorically resembles other places — these are attributes that operate on a level where thought is barely initiated. In this way, buildings engage attention rather than shape rational understanding; they prompt an attitude rather than form a correct knowledge or interpretation. Consequently, because buildings do not impose concepts of reality but make them thinkable, many concepts may coexist and be in symbolic dialogue with one another within a physical space.

When people interact with a building, their understanding of it involves another aspect of this process. A knowledge of reality can relate to life in various degrees — for example, phenomena modeled by quantum physics relate to issues of human existence quite differently than does the knowledge of ethics. Similarly, it does matter how a person interacting with a building finds personal relevance in this interaction. To reveal these kinds of meanings, the building must somehow engage, like Lacan's mirror, a personal sense of reality.[9] I will call this kind of interconnection between the person who knows and the building being known the *subject-object relationship*. For example, a house can be seen as the place where a family shapes and reveals its identity in the never-ending construction of its symbolic environment. Institutional buildings have always been used to simultaneously shape concepts of human subjectivity and the understanding of the world at large. The last two centuries, however, have been crucial for the contemporary understanding of Western subjectivity and its relationship to all others. Architecture has played an important role in these processes. Consider,

for example, Foucault's discussion of how the transition in the way individuals related to the society and its power structures between the classical era to the modern world was demonstrated by the design for a particular building. Panopticon, Jeremy Bentham's design for a prison, transformed the individual into a visible "object of information" controlled by omnipresent and invisible power (Foucault 1979, 200). It was the symbolic dimension of this project that made it also useful for designing schools, psychiatric hospitals, and workplaces—the sites of disciplining the society. Later, in the second half of the nineteenth century, when institutional structures equated knowledge with power, architectural designers created different kinds of sites. Museums and world expositions, for instance, created physical places signifying centers of this new abstract power but made them accessible to the masses of the working and middle classes. In this way, architecture facilitated the construction of a totalizing view of the whole world and its history and consequently reshaped Western subjectivity. It was, in the words of Tony Bennett, an order of these buildings "which organized the implied public—the white citizenries of the imperialist powers—into a unity, representationally effacing divisions within the body politic in constructing a 'we' conceived as the realization, and therefore just beneficiaries, of the processes of evolution and identified as a unity in opposition to the primitive otherness of conquered peoples" (1988, 92).

Although these examples describe buildings that explicitly signified power, I believe that contemporary buildings engage human subjectivity the most when they become inseparable, in one's mind, from everyday life. When buildings and the spatial practices they structure become so familiar that they disappear from our field of perception, their impact is the deepest. That is why places that people commonly understand as simply convenient, such as shopping malls, or merely efficient, such as highways, profoundly shape our contemporary way of life. They support a tacit alignment between concepts of reality built into everyday architecture and one's sense of the self.

One elemental question remains: if a person interacting with an existing building becomes aware that this building represents a particular concept of reality, how does this person know that his or her understanding of this concept is true? To say this differently, how does one iden-

tify the *authority of signification* in an existing building? The answer seems easy if one believes in the transcendental and transcultural qualities architecture possesses.[10] To answer this question, I return to my discussion of architecture as a repository of concepts of reality. It is noteworthy that nowadays the most likely answer would be that the designer has the final authority over a building's meanings. However, the designer, the one who could supposedly explain the meanings of architecture, is not there to do so. On those rare occasions when design intentions are explained by architects, their explanation of symbolic meanings is usually the most trivial part of their reasoning process. This may result from what Suha Özkan observed as architects' endless "tendency... to redefine architecture in order to accommodate one specific aspect of discourse in theory or practice of the profession" (Özkan 1999, 148). Exploring architecture as the representation of concepts of reality starts with a belief that architecture stands for a certain understanding of reality. This belief, however, does not have to be grounded in a transcendental authority of signification that would have guided the thoughts of a designer centuries ago and thus would allow us to decipher unequivocally representational signs now. As discussed, the design process crystallizes multiple thoughts and interests concerning representational intentions. Consequently, it is exactly the absence of a transcendental authority and the need to consider the intentions of many people that disclose the political hermeneutics in architecture and make it possible to trace how and who has shaped representational processes. The dispersion of the authority of signification and the impossibility, even in the most totalitarian society, of naming a singular authority whose principles totally organize the representational aspects of a building, are the sine qua non of the culturally specific symbolic functioning of architecture. This means that the symbolic negotiations I discussed can be studied only within their network of political and ideological dependencies and that the authority of signification is a part of this dynamic process itself.

Consequently, the practice of interacting with a building constitutes a mode of knowing similar to that of designing architecture. Architecture still initiates symbolic thoughts; cultural negotiations around various concepts of reality still occur; and many people can still partic-

ipate in this process. In this way, a building continues the transformation and crystallization of concepts of lived reality beyond the design phase.

Published Knowledge

It seems only reasonable to question the constitution of the published knowledge of architecture in the same way as the common knowledge of existing buildings. When one compares what a person who interacts with a building knows versus what a person who studies architecture from books and articles knows, the distinction becomes telling.

Because buildings remain fixed to their locations, learning about them requires that their reality be reproduced to make possible the perception and cognition of architecture from a distance. This way of representing architecture differs from the way a building would present itself to our perception. The complex processes I have discussed before must be replaced by a third party's showing relevant architectural attributes and explaining their significance.

When the authority of signification is considered, it should be noted that whoever explains architecture is placed in a privileged position. By the act of explaining, this new authority repossesses symbolic meanings. This appropriation is easiest when the original designer is no longer available to verify critics' speculations or if the design activity arose out of common social practice and as such could be seen as determined by local traditions, social structures, and the physical environment. Seemingly, if writers can fully understand what the creators "really" intended or had to do and how it was realized, they gain authority almost equal to that of those who created the work. Consequently, the process of analyzing and explaining operates best by foregrounding in architecture all that can be traced as explicitly intentional or necessary. Undoubtedly, this process helps to justify the privileged position of the writers. On the other hand, as a model of knowing based on the clarity of will and logic, it excludes the complex processes of crystallizing and negotiating concepts that I outlined before.

Another important aspect of truthfulness in architectural scholarship is the issue of the epistemological assumptions built into scholarly

methods, two of which are worthy of outlining here. One assumption that unites, for example, the traditional history of architecture, the modernist paradigm of architectural sociology, and contemporary cultural studies that explore architecture from a literary perspective is that they all take for granted that societies and cultures first form their concepts verbally and then in architecture—that architecture dresses these verbal concepts up in material forms. Such oversimplification of all processes of symbolic negotiations and the emergence of thought I discussed earlier can be identified when a scholarly publication places architectural form in a binary opposition to meaning; when, for example, a building is dismissed as meaningless if its form does not literally fulfill the expectations created by a supposedly correct narrative, or when a critic approaches it with insufficient experience in analyzing the nonliteral or nonfigural attributes of architecture.

The other assumption lies in the overall taxonomy of architectural knowledge. Although architectural knowledge is frequently presented as interdisciplinary or crossdisciplinary, it is explicitly divided into a set of distinctive subfields, which have been constituted after, and rely on, the epistemological authority of their "pure" models, such as physics, history, or sociology. Thus, when explaining a historic building as an important structural accomplishment, for example, the correctness of the researcher's methodology and conclusions is secured by the principles of physics. How this particular structural solution presents an architectural achievement derives from an understanding of this building's physical performance. Such conclusions stand on their own and do not have to relate to other ways of knowing this building's significance. This right to single out aspects of architectural reality stems directly from the authority that traditional epistemological models have over the segmented knowledge of reality. It is noteworthy, however, that this taxonomy of knowledges resulted from the classical *epistēmē*'s elimination of vagueness in analytical thought and from the nineteenth-century structuring of knowledge (Foucault 1970). Both the elimination of vagueness and the institutional ability to exercise knowledge as power are antithetical to what I have identified as uniquely architectural mode of thought. That a building can make fragile symbolic concepts of reality thinkable and that this can happen in a complex interaction be-

tween all aspects of architecture and life is too uncontrolled a knowledge to register within these traditional disciplinary concepts.

When a person reads a book about an existing piece of architecture, the subject-object relationship directly depends on the mediating role of the writer who describes, analyzes, and explains. The subject (the person who studies the book) and the object (the building being studied) relate to each other only as far as the writer implies it in the argument. While reading a book and looking at illustrations, the reader agrees to follow the narration. The ability of the symbolically rich and physically passive form of architecture to imply thoughts is replaced by a writer's or photographer's control of connections between the verbal explanation and the depictions of a building. Reading about architecture is a much more structured practice than the symbolic dialogue a person might have had with an existing building. What the reader perceives, the writer has already selected to be seen and understood. The process of reading, in other words, involves the mode of communication rather than that of representation. The reader reads primarily to understand messages formed by the writer. These mediated observations and conclusions come at the expense of what might have happened between the subject and the object in the space of architecture. Instead of architecture that merely initiates thoughts and confronts the subject with symbolically rich but inconclusive observations, a book embodies a rhetorical practice of arguments and conclusions. A writer may still reflect on symbolic issues that redefine the subject's identity, but this reflection will be devoid of the metaphoric richness that architecture offers.

A book or an article thus creates its own space of representation. Text and illustrations, composed to interact with human thought, foreground particular attributes of architecture very differently from the way a building would. Certain architects of the modern movement, Le Corbusier and Giuseppe Terragni, for example, have recognized and used this representational phenomenon when they published their architectural ideas and buildings, designing the space of representation of their publications like that of architecture.[11] Most frequently, however, books and articles about architecture follow general scholarly patterns. They provide so-called factual information in two forms: verbal and numerical (for example, dates, names, and records of events associated with

the building's history, measurements of its physical performance, or empirical statistics resulting from the postoccupancy research) or as illustrations. Visual interaction with illustrations seems to resemble the way a person experiences a building more than does learning from verbal and numerical data. However, a building indiscriminately reveals its symbolic attributes, whereas measured drawings or photographs showing the same building are highly exclusive. Measured drawing conventions, such as plans, sections, and other paraline projections, are, first of all, tools of analysis.[12] They record only what can be measured — the physical size, geometric shape, and location of material elements. Whatever is recorded becomes a coded sign — a line or a number. Attributes that "barely initiate thought," such as the visual and experiential phenomena I discussed earlier, do not register within such a system of analytical notation.[13] Photography, on the other hand, filters reality in a different way. A photograph seems to be an "objective" record of the field of vision that, if not tampered with, is trustworthy because the photochemical process provides a reliable method of recording an image that appears in the box of a camera. This belief is grounded in the same epistemological concept that made camera obscura a symbol of truth in viewing during the classical era.[14] All that makes photography appear believable or objective conceals how much a photograph is a constructed representation. Unlike a person's experience in architectural space, a photographer's picture singles out a particular view and freezes it in time. That which the image illustrates is composed to be seen in certain manner, making particular relationships visible and hiding others. Photographers frequently manipulate light, either artificial or natural, to enhance selected attributes of architecture. All traces of human habitation or symbolic characteristics that exist in the space of the architecture but violate the purity of the master argument are frequently excluded from the picture.

Consequently, the act of publishing architectural knowledge produces a fundamental epistemological and representational shift. Traditional practices of architectural research and knowledge dissemination predetermine their results. That way of knowing aims at certainty and stability of interpretations and, in this way, transforms an existing building into a site of affirmation. Thus, in the mind shaped by this kind of knowledge, a building loses its ability to engage all aspects of life and

perception and to negotiate the functioning concepts of reality and becomes, rather, a place where a "legitimate" interpretation, the one authorized by the powers that this knowledge represents, can and should be affirmed on site.

Commercial Promotion

Architects' promoting their work to attract potential clients constitutes another practice of knowing and representing architecture. This market-driven practice revolves around the business of architectural services. In a market economy, the ability to disseminate information about a new building is essential if an architect is to achieve popularity and financial success. Generally speaking, commercial strategies stem from an understanding of the market and aim at predicting or, even better, creating demand for a particular product. Although profit remains the driving force behind these strategies, technology provides the means. The history of capitalism shows that the relationship between technology and power has evolved from that which merely acted on the physical reality into that which transforms reality at its cultural level by changing the way we perceive and interpret the world. Although the work of architects transforms the material world, the business of architecture depends on these new kinds of technologies. Whether called cultural technologies (Bennett 1988, 76), technology of contemporary society (Jameson 1991, 37), or mental technologies (Baudrillard 1999, 33), they have been identified as essential for the cultural changes of the last two centuries. The construction of viewing and the ways of reproducing the visible have been at the center of these processes. Consider, for example, the stereoscope, an optical device of the first half of the nineteenth century that creates an illusion of three-dimensionality in photographic images. It turned the human body, specifically its optical physiology, into a site where visual sensations could be controlled (Crary 1990, 118–36). The buildings of museums and world exhibitions of approximately the same period used spatial arrangements of objects and visitors to view the knowledge of the past as well as the Western and non-Western worlds (Bennett 1988). But it was the mass media, such as printed catalogs of commercial products, postcards, and movies, that, according to Beatriz Colomina (1994), reshaped the modes of perception and representation

at the beginning of the twentieth century. The style of modernism emerged when architects designed buildings to function like mass media. What started with nineteenth-century viewing devices continues now in new technology. Virilio sees digital techniques of visual simulation as "duplication of 'stereoscopy of the real'" leading to "industrialization of the sensations" (1993, 126). It seems that the ultimate goal of these new technologies is to control all forms of perception to the point where the simulated and the real cannot be distinguished — the perfect virtual reality. Today this control of perception reaches far beyond optical tricks of the nineteenth century. On a global scale, mass media and information technology shape our understanding of reality by manipulating the perception of facts and their meanings.[15] In this new world, where the perfection of digital simulation and the flow of information are rapidly increasing, skepticism follows. This technologically mediated sense of reality seems to lose its ability to engage people in a meaningful way, its symbolic relevance becoming diffused by what Gianni Vattimo calls the infinite interpretability of reality (1988, xxi).[16] These cultural phenomena indicate the future that architects face. That the commercial promotion of architecture should be seen as a part of these changes suggests that we should examine popular practices of representation in the business of architecture — the symbolic constitution and functioning of commercial magazines and the use of computer graphics.

When the authority of signification and the subject-object relationship are considered, commercial promotion discloses a different set of issues than those I discussed in the previous two practices of interacting with a building and reading a book. Beautiful photographs of newly constructed buildings or digitally simulated images of structures designed but not yet built may look similar to the photographs in scholarly publications, but their symbolic functioning is radically different. I assert that viewing a commercial photograph erases the distinction between the authority of signification and the identity of the subject.

When published in a commercial magazine, simulated images of new designs or photographs of newly constructed buildings are used to promote architectural products. It is noteworthy, however, that commercial promotion is a symbolic practice that primarily identifies and engages potential clients. The most important aspect of this process is that this

practice simultaneously aims at attracting attention and places one's ego in the center of symbolic meanings. A potential client must become the measure of the product's value and its symbolic content. Thus a glossy image depicting architecture must show a new version of what a targeted clientele likes to see, convincing them that what they find exciting in the image is all that matters in the depicted piece of architecture. Consequently, the looking subject becomes the authority of signification. This precludes the complexity of the symbolic dialogue with architecture discussed before. What the beholders find in a picture must affirm what they already like. Promotional photographs of architecture do not want to disrupt this affirmation or force the viewer to reflect critically on his or her subjectivity. The image, rather than supporting a symbolic dialogue between the viewer and a depicted building, encourages the viewer's desire to own a similar kind of architectural commodity. This constructed desire for the represented object shapes the commercial subject-object relationship. If such a picture encourages a reflection on the subject's identity, this reflection is framed only in terms of material possession.

The space of representation created when architecture is commercially promoted is also telling. Attributes of architecture are foregrounded in a new way and for different reasons than those in the practices discussed earlier. Commercial magazines are full of "perfect" or "stunning" illustrations of newly constructed buildings. A reader of an architectural glossy magazine may have difficulty distinguishing which images belong to the section advertising the use of new building materials and which describe new significant architecture. What works for an advertisement works for architectural promotion as well. Editorial boards select buildings that guarantee the popularity of the magazine. Photographs show hyper-real colors, dramatic forms, and amazing locations. Digitally enhanced photo-realism makes these pictures believable. At the same time, they attract and focus attention in a particular way. A picture seduces the viewers by showing something that cannot easily be seen in their lived reality: a glimpse into the exclusive world of the rich, visually perfect places of work or social life, or, at least, incredible light effects. Moreover, the latest stylistic trends or the newest "proper attitude" toward material or cultural environment get translated into dis-

tinct visual attributes: fashionable shapes, "high-tech" materials and details, or architectural forms that are characteristically understated to imply social or environmental concerns, for example. In this way, the space of representation that commercial promotion constitutes makes it easy for a potential client to identify with attributes of a particular visual fashion or trendy ideology.

Similar practices can be observed in the way computers simulate the perception of architecture. An architect can now present the appearance of a building to a client before it is constructed. The simulated images show precisely the form of the building and its light distribution, including colors, texture, and reflectivity of materials, even the optical properties of the air. All the dramatic effects and stylistic attributes that can be photographed can be simulated on a computer screen as well. Depending on the hardware and the time available, such an illusion can reach photo-realistic accuracy, where everything looks exactly as if built. Moreover, such a photo-realistic image automatically excludes all those uncontrolled traces of life that could contaminate a photograph. In the future, this kind of visual experience will be interactive, and the client will be able to choose in "real time" what to look at or where to move in the simulated space of the building being designed. On the one hand, this experience appeals to the client's desire to expand the personal freedom of choice over an imaginary product. On the other, the commercially rooted belief that "what you see is what you get" is combined here with the total control of visual perception, and together they create an extremely superficial sense of the space of representation. This way of presenting architecture hides the complexity of symbolic issues behind dazzling effects and literal interpretations. Any technology that aims at replacing imagination with fully controlled visual stimulation may work for the entertainment industry, but it trivializes architecture.

Consequently, because commercial promotion makes the subject the sole judge of represented reality, reduces the subject-object relationship to liking or desiring, and constructs symbolic reality out of attributes that connote fashion, the resulting understanding of architecture differs profoundly from that of inhabited buildings. The processes of instant gratification replace Lyotard's processes of shaping representational consciousness (1991). As discussed earlier, representational consciousness

deciphers what we perceive as related to all that we remember and can imagine. Shaping this consciousness is a continual and difficult process of rethinking relevant concepts of reality. In the commercially driven modes of representing architecture, perception must be pure and instantaneous; otherwise the pictures could not dazzle or seduce a client. As Baudrillard observed, in such a process, imagined and remembered reality become prey to "the combined effects of impatience and indifference" (Baudrillard, 1988b, 95). Because images produced in this process are not meant to be read within a complex network of references, representational processes are replaced by the mechanisms of simulation of the symbolic—by the production of the most superficial effects of reality.[17] When promoted in this way, not only images but material buildings lose their ability to engage thought. Famous new buildings become tourist attractions. The tourist industry puts them on the list of attractive travel destinations: sites that are meant to dazzle or intrigue a visitor. In one's mind, such a site, whether it is an ancient temple in a distant country or a new building close to home, is reduced to a symbolic environment that functions when it pleases a visitor. By dismissing the difficult symbolic processes discussed earlier and foregrounding one's ego by making liking or disliking the only measure of any value in architecture, a building is truly commodified.

Conclusion

The separate practices I have discussed are actually highly interconnected. New buildings are frequently designed to meet one primary requirement: to be photogenic. In those cases, instead of designing a building for the way people interact with it, an architect designs for, and benefits from, the effect that the building's image produces. It should not be surprising that often the practice of learning and teaching architecture also follows these patterns. Thus an architectural design studio becomes no more than an implementation of a commercial technique when students, as clients of educational services, are encouraged to seek visual pleasure in the digital effects they produce or to treat their intuitive emotional attachment to certain design ideas as the ultimate sense of value in a design project. It is also difficult to distinguish between dissemination of architectural research and commercial promotion when

the knowledge of the latest building technique is packaged to signify progress and disseminated across cultural divisions.

The mechanisms of architectural knowledge production that I have outlined in this chapter are similar to, and in fact they have been a part of, processes of colonization. Edward Said's observation that the colonizing powers epistemologically transformed other cultures, "receiving these other cultures not as they are but as, for the benefit of the receiver, they ought to be," can be applied to the contemporary knowledge of the world's architecture (1979, 67). These processes have reached far beyond the structuring and dissemination of information; they have colonized imagination and sensitivity and consequently predetermined the thinkability of symbolic ideas in architecture for people educated within the Western *epistēmē*. I believe that it was exactly the building's ability to keep the symbolic concepts of reality in a state of nascence, its ability to support a never-ending dialogue between these concepts and the changing conditions of life, that the colonizing forces exploited. The culture-specific mode of enunciation that architecture supports proved to be extremely vulnerable when confronted with the precision of the Western mode of thought imposed to "explain" it.[18] The global market continues these processes by turning the symbolism of architecture into a commodity—that is, emptying lived reality of its cultural specificity and filling that void with the commercial notion of universal exchange value. These processes functioned not only for the colonization of the hybrid complexity of the other realities; they eliminated from the taxonomies of architectural knowledge culturally "impure" or "provincial" Western architecture as well. The world is still full of underexplored and lived symbolic environments. The cultural dimensions of even the most popular commercial buildings still seem transparent to traditional methods of architectural research. The difficulty of acknowledging the epistemological processes through which we "know" architecture and how they predetermine the nature of that knowledge results from the convergence of political and commercial forces to tacitly structure the ways we perceive, think, and communicate. Consequently, to expand the understanding of how buildings have contributed to different cultures and how they participate in contemporary cultural phenomena, the discipline of architecture must develop new critical strategies and change its epistemological assumption.

Notes

1. Usually, the architectural program for a new building states only the requirements concerning its physicality (for example, sizes of spaces) and practical aspects of its function (such as efficient adjacencies of activities).

2. This process may be seen as analogous to the emergence of discursive formations. According to Foucault, the ideological and political processes of the formation and dissemination of concepts lead to the emergence of epistemological statements and then knowledge (Foucault 1972, 106–13). The knowledge that emerges from the process of designing a building follows this model, but the architectural process is local and primarily synchronic and differs from other disciplines in the way nonverbal modes of thought are essential for refining its conceptual statements.

3. Frequently, even the understanding of the symbolic functioning of a completed building is constructed in a similar manner. In such approaches, the interpretation of a building's symbolism follows how the building's form can be broken into a collection of its figural components, as if recognizable and namable figures created the only grounds for symbolic representation. For the discussion of a different point of view, the study of nonfigurative representation, see my essay "Architecture and the Iconoclastic Controversy," in *Medieval Practices of Space*, ed. Barbara A. Hanawalt and Michal Kobialka (Minneapolis: University of Minnesota Press, 2000).

4. Kenneth Surin says that "every culture generates for itself its own 'thinkability' (and concomitantly its own 'unthinkability' as the obverse of this very 'thinkability'), and its concepts are constitutive of that 'thinkability'" (1995, 1183). Similarly, Raymond Williams discusses structures of feelings as a set of "affective elements of consciousness" that could either explicitly manifest existing social structures or be a part of "a social experience which is still *in process*, often indeed not yet recognized as social but taken to be private, idiosyncratic, and even isolating" (1977, 132). He also says that "the idea of a structure of feelings can be specifically related to the evidence of forms and conventions—semantic figures—which, in art and literature, are often among the first indications that such a new structure is forming" (1977, 133). "Structures of feelings" led Edward Said to a similar concept of "structures of attitude and reference" (1994, 52).

5. For many, the processes of conceptual negotiations in architecture could easily be explained as a particular mode of communication. When considered vis-à-vis my definition of representation, communication can be seen as a particular and narrow aspect of representation—a structured exchange of thoughts that are already well formed, ideally like information. Consider, for example, Roman Jacobson's discussion of the process of communication. Although Jacobson studies the poetic dimension of verbal communication, he still follows the primary linguistic model, the one in which the process of communicating a message consists of forming a message, then coding it, intentionally transmitting between a sender and a receiver via a channel, and finally decoding it (1960, 353).

6. Eco (1980) focuses on developing a system of codes that supposedly reflect the culture-specific symbolic functioning of architecture. Bonta tries to establish an elaborate and seemingly highly systematic taxonomy of communication, which treats architecture as a cultural phenomenon operating through signs (1979, 26–30). However, I think that Geoffrey Broadbent discloses the false assumption behind these kinds of studies when he asserts that "any attempt to design buildings consciously for the effects they now have on their users [is] a pragmatic affair," and thus he implies that designers must have always obeyed those practical rules that turn visual phenomena into a system of visual communication (1977, 482).

7. Such a concept of the space of representation is closer to Foucault's discursive formation or the specificity of discursive practice, which describes processes that are not predetermined and are negotiated within the political and ideological networks (1972, 38, 55), than the representational space of Henri Lefebvre, which, though seemingly more "architectural" because inhabitable and containing a coherent system of culturally grounded symbols, is presented as a particular outcome of the production of social space determined by class struggle (1991, 33, 39). Denis Hollier also asserts that architecture is the space of representation, but an oppressive one. Although I do not agree with the notion that architecture, as a symbolic environment, is the "architructure, system of systems" that predetermines or imposes symbolic meanings, I think that by revolving around formation of thought, Hollier's criticism points out the same specificity in the architectural mode of thought I propose (1989, 31–36).

8. See, for example, de Certeau's text "Walking in the City," where he juxtaposes the view when walking with the totalizing view from above, two spatial practices that reveal different ways of reading the symbolic complexity of the city (de Certeau 1984, 91–110).

9. For Lacan, the primary component in the formation of a child's subject identity is the reliance on how the child perceives himself or herself as an object reflected in a mirror or perceived by other people (1980, 1–7). This approach will help me to challenge another traditional set of polar opposites, that of the object and the subject, and to explore their relationships in architecture.

10. Consider, for example, Karsten Harries's discussion of the symbolic function of architecture. In "Representation and Re-presentation" Harries asserts that "if architecture is to help to re-present and interpret the meaning of our daily life, it first has to open itself to these symbols [of the natural language of space]. Needed today is a recovery of the natural in the inherited conventional symbols" (1997, 132). Harries implies that deciphering these natural signs is possible because of the transcendental ontological character of phenomena and transcultural character of symbolic associations they evoke in the human mind; that is, he argues for the existence of an absolute signifier. In contrast, I believe that it is necessary to identify the authority of signification in the processes of signification.

11. Beatriz Colomina reveals how Le Corbusier created a "collision of images and text" (1994, 119) and thus represented (or, as Colomina implies, exploited) po-

etic and commercial functions of architecture in the world of mass media. Kenneth Frampton (1986) discusses how Giuseppe Terragni composed photographs of his buildings to increase those pictures' ability to engage imagination, in the way similar to architecture.

12. It is not a coincidence that the systematic character of many architectural conventions originated in their analytical usage for military purposes (Scolari 1985).

13. This is another example of epistemological legacy of the classical age. As a system of notation, architectural graphic conventions are based on the concepts of what Foucault calls transparent signs (1970, 63–67). These systems of signs and the rules of their construction, for example, the lines or patterns a draftsman uses to draw a section of a building, were intended to leave no doubt about their analytical functioning; and at the same time, this system was meant to eradicate the murmur of other meanings — interpretations created by "the spontaneous movement of the imagination" seeking resemblances (1970, 58).

14. Jonathan Crary shows that the fact that a person located inside the apparatus of camera obscura could only witness how a picture of the world outside appeared in the black box, never being able to see himself or herself in that picture, made this viewing device a physical manifestation of how the mind objectively views images created in a human eye (1990, 41).

15. See, for example, Jean Baudrillard's reflections on how the illusion of the Gulf War was constructed by mass media (1994, 62–65).

16. Although Vattimo's observations that the operation of mass media in the late modern society is responsible for the "weakening of reality" by weakening the sense of a symbolic thought (1988, 27–28) are pertinent for my study, what I have associated with the specificity of the symbolic functioning of architecture is not grounded in the ontological dimension of reality, but in the very nature of cultural practices. It is the need for making symbolic concepts of reality thinkable, in an individual and collective sense, that prompts the symbolic function of architecture. Moreover, I believe that it is not the process of technological mediation of thought but the commercial purpose for which these new technologies of viewing are developed that weakens symbolic notions of reality.

17. See for example, "Simulacra and Simulations" and "Fatal Strategies" (Baudrillard 1988c, 166–206).

18. It seems telling that in current postcolonial discourses, the subject of culture moves from "an epistemological function to an enunciative practice." Homi K. Bhabha argues for a shift from this approach that treats "culture as epistemology [that] focuses on function and intention" to that in which "culture as enunciation focuses on signification and institutionalization" (1992, 443).

4

The Form and Structure of Architectural Knowledge: From Practice to Discipline

Julia Williams Robinson

In the United States, the field of architecture is in the process of evolving from what has been a practice, informed by other disciplines, into a discipline with its own body of knowledge.[1] Since the nineteenth century, its locus of education has changed from the architecture firm to the higher education institution. Its instructional practices have shifted from a predominantly apprenticeship system to a system of classroom-based teaching supplemented by apprenticeship. The role of architectural instructors is changing from master architect, whose knowledge and theory of making buildings is personally held, implicit, practical, and integrated, and who instructs by demonstration, to that of professor who imparts explicit, specialized knowledges, using explanations based in architectural theory and science. The role of the student has changed from learning one synthetic approach from a knowledgeable individual to learning to synthesize a variety of knowledges from different perspectives and disciplines. Architectural theory is changing from prescription based in historical precedent to critical analysis and explanation deriving in part from the scientific model (Lang 1987). In the process, the discipline seems to have become fractured by the increasingly diverse knowledges it borrows from engineering, art, history, and the social sciences. Additionally, because the majority of the education of architects now takes place within the academy and is also the locus of most of the development of new architectural knowledge, there is a need to define the position of disciplinarity within architecture.