

Shannon Mattern – Rendered Realism – State of the Realm, Glasgow School of Art, November 2003

Journalists and other cultural critics have noticed it: over the past several years, Americans have taken an increasing interest in design – the design of their teapots [SLIDE 1], toothbrushes [SLIDE 2], and tennis shoes [SLIDE 3], and particularly the design of their physical environment [SLIDE 4]. And, fortunately, as the public's interest has grown, they've been provided with ever more opportunities to participate in, or at least witness, the process through which their physical spaces come into being. Designers and their clients – especially public institutions – have finally begun involving the public, the end-users, in design processes.¹

Planners and designers and management experts have developed – even trademarked – models of public involvement in design [SLIDE 5]. These models acknowledge that much of design is communication – verbal and visual – and that engaging both specialist and non-specialist publics in design projects, therefore, requires methods of communication that will reach the multiple publics that hold a stake in the design of a particular place.

While there is much research in the areas of participatory and communicative design that addresses the *verbal* components of design deliberation, there has been much less attention paid to the impact of visual communication strategies. Design visualizations have not always been charged with communicating to a public [SLIDE 6] – primarily because, until recently, design rarely incorporated public input. William Kirby Lockard, in his 1977 book Drawing as a Means to Architecture, claims that communication with the general public “has historically been fulfilled by the building itself” (107). Thus the first image of a

building that the public saw was the completed structure; the public played little or no role in its design, and the completed building was the only architectural reality they knew.

Since those days, however, the image [**SLIDE 7**] has risen to a supreme position in design communications. As McLuhan, Sontag, Baudrillard, Virilio, and a host of other theorists would agree, the image has been championed as universally legible, in comparison to the specialized verbal rhetorics of particular disciplines. The image of a place, it has been assumed, is capable of conveying layers of information – and of conveying them impartially, in a more easily comprehensible format than a verbal description of that place.

And thus visualization has played a key – yet often uncriticized – role in public design deliberations. It is true: Visualization can be empowering. It can facilitate communication “by providing a focus for a community’s discussion of their design ideas, guiding them through the design process and raising their design awareness.”² Visualization can indeed allow for the inclusion of groups who might not otherwise have been able to engage in design discussions. Geographic Information Systems [**SLIDE 8**], for example, allow for specialists to convey layers of information to a nonspecialist public. And, for the layperson, visualization allows her to sketch an idea when her non-specialist vocabulary fails in describing it.

But visualization techniques and technologies allow for “simultaneous marginalization and empowerment.”³ GIS technology, some have noted, captures “one official version of reality, which is heavily biased towards a scientific agency and the ‘expert culture.’”⁴ Urban designer Kheir Al-Kodmany says: “Clearly, the technology has the potential to

disenfranchise the weak and powerless through the selective participation of groups and individuals. GIS applications are undergirded by questions about whose data are to be included...and how are they to be used, who produces and controls the information..., who determines the questions to be asked, and whose views of the world are being captured and represented.”

Furthermore, with GIS, Photoshop, CAD, and the plethora of sophisticated software packages available today to most architectural designers, even the most rudimentary of design concepts can take on an aura of impermeability [**SLIDE 9**], immutability, completion. What happens when, in the initial stages of the architectural design process, the designer presents a rendering that is so polished, so seemingly complete, and supported with “objective data,” that the client, the jury, and the public see no room for criticism and little possibility for revision? What happens to design deliberations when the initial scheme is presented as a *fait accompli* [**SLIDE 10 -- Minneapolis**]—as if this representation of a building is already the real thing? Architectural visualization – despite its potential for empowerment – also has the potential to effectively remove the “public” – and, for that matter, the “process” – from public process. When the architect uses a host of media to render the design realistic – to make the building appear as if it already exists – the public sphere that could arise around design projects is, unfortunately, prematurely defused and disbanded.

I’m currently working on a book on American urban public library buildings that have been constructed since the early 1990s [**SLIDE 11**], and those that are currently under construction or in design. Public libraries have been among the most ambitious in their plans to involve the public in the planning process. Recognizing that library buildings exist

primarily as public spaces and civic icons, library administrations have called in user and staff groups to help them to design buildings that function well for both patrons and employees, and that serve well as physical embodiments of a civic identity. And because, in many of these cities, the public has provided at least partial funding, through bond measures, for the construction, the public feels entitled to participate in the design of these public spaces.

In my research on the **processes** through which these buildings were designed, I uncovered several examples in which images were reified, and that reification impacted either the creation of the building, or the reception and use of the space once it was built.⁵ In some cases, a misread image from the design process precluded the *realization* of the design. And in other projects, a reified image hampered public participation in the design, allowing for the disenfranchisement of the publics who were entitled to contribute to the design of *their* public spaces.

In Cleveland, architects Hardy Holzman Pfeiffer were charged with renovating the existing main library [**SLIDE 12**], and building a new addition a few hundred feet away, across the beloved Eastman Reading Garden [**SLIDE 13**], one of the city's favorite public spaces. Until that point, the only connection between the two buildings was an underground passageway; if a patron found herself on the top floor of the annex, she had to take the elevator down to the basement, and across the tunnel in order to reach the other building – quite a long and inconvenient trek, particularly if one is burdened with books. The architects called for the demolition of the existing annex and the construction of a new addition. The connector [**SLIDE 14**] between the existing Main Library and this new building – what the architects called “The Link” – was to be a “stepped, glass structure

that connected the pavilion to the main building while expressing the Library's evolving technological character." This Link of two glass wings would "embrace" Eastman Garden, "furthering the sense of enclosure." The glass walls wrapping around the garden would block noise from the street while permitting the lateral passage of light through the glass, and maintaining a connection to the sky above.

The model of this design that the architects created to show to the public made use of opaque materials [**SLIDE 15**] – even the glass "Link" was rendered in brown cardboard. Library administrators suspect that because the model materials did not convey transparency, the public envisioned the wings as opaque. Patrons viewing the model from the side saw a large mass occupying the garden. Their beloved Eastman Garden, they feared, would be trapped inside cement walls, left in eternal shade and stagnant air.

Thus marked the rise of the Save the Eastman Garden action group, and their letter-writing campaign. The Library received hundreds of letters in opposition to the plan – and many of those letters spoke out against "eliminating Eastman Garden" and replacing it with "a five-story building" – misinformation derived from a misreading of the model.

Eventually, the Library Board declared a 6-month moratorium on the plan. Then, in 1991, the library started all over again with a bond referendum and a new architect selection process. In the design that resulted [**SLIDE 16**], the Library's circulation problem has not been solved. With the Eastman Garden controversy, the Library lost its chance for an above-ground connector. The misinterpretation of a model image spawned a public movement against the realization of HHP's design – and thus precluded the solution of the Cleveland Public Library's circulation problem. "If only the architects had spent a bit more

on the model materials”, one librarian said; if only they had rendered the wings in plexiglass, not cardboard. Thus in Cleveland the misinterpretation of a physical image – an architectural model – prevented the realization of that image. The realization of the design became impossible when its representation was deemed unacceptable.

The richest example, and undoubtedly the best at illustrating contemporary theory on “the image” and “the real,” is Rem Koolhaas’s design for the Seattle Public Library [**SLIDE 17**], a project on which I wrote my dissertation. Seattle, a city known for activism and public process, developed an elaborate scheme of participation: there were small “church basement meetings”; large, well-attended public forums during the architect selection and through the various stages of design; public and staff workshops; open houses [**SLIDE 18**]; mockups of various elements of the design, which the public was then invited to test; comment cards; animated “walk-throughs” of the design; meticulous documentation of the process on the library’s website; and extensive local press coverage.

When Seattle hired Koolhaas, it hired a media-savvy architect, a master of visual and verbal rhetoric. In an article in Time magazine, Belinda Luscombe writes, “He knows that the arcane architectural language and connect-the-dots academic ephemera that fill his books [**SLIDE 19**] only go so far among the media, or their clients—and his—the public. So he has learned to be multilingual.” In public open houses, for example, the design team offered models of the building, floor plans, and computer-generated videos of the design—different representational formats to appeal to different viewers with different ways of learning.

Koolhaas's finesse and eloquence proved particularly persuasive when paired with graphics by designer Bruce Mau [SLIDE 20] [SLIDE 21]. Koolhaas's firm, the Rotterdam-based Office for Metropolitan Architecture, "generates this metaphysical face in something that they call data," [SLIDE 22] [SLIDE 23] [SLIDE 24] said a local author and member of the advisory panel.⁶ Their graphs and charts and diagrams imply that their research has "objectively directed them toward some spatial organization." Timelines, flowcharts, [SLIDE 25] and bar graphs, with their precise spatial organization and their implied linearity and logic, become "natural[ized] expressions of data," which consequently naturalize their proposed designs.⁷ The firm's graphics function as scientific data sets, seemingly derived through objective study and rigorous testing. Who could refute such an elegant solution?

Ben van Berkel and Caroline Bos of another Dutch firm, UN Studio, address this rationalization of design decisions, and the rhetoric of architectural diagrams: "The pressure of rationality," they say, "is such that architectural theory is streamlined toward a moment of compelling logic, in which factors of location, programme, routing, construction and anything else that plays a role in the origination of a design are directed toward the triumphant conclusion that the particular design under discussion is the only objectively justifiable one." [SLIDE 26] In this way, graphics were marshaled to buttress a particular solution rather than to make informed debate possible.

Photographs functioned rhetorically, too. Koolhaas began one of his public presentations with an evocative image of the World Trade Organization riots [SLIDE 27], explaining to his audience that while Seattle was trying to decide whether or not it wanted to be a real city, the world had already made that decision for it. The visual taunt hit close to home

and elicited nervous laughter. In another public forum, he flashed an image of two naked boxers eating oysters[**SLIDE 28**] —an image drawn from his 1978 book, Delirious New York. The image was intended not only as a commentary on program and the functions of architectural spaces—but also as provocation. One journalist noted that “it seemed like a moment from...‘Saturday Night Live.’ Was he playing with us?”⁸⁹

Mocking or not, Koolhaas’s polished presentation – both visual and verbal -- made the design seem unassailable. A local reporter suggested that the refinement [**SLIDE 29**] and seeming comprehensiveness of Koolhaas’s proposal enhanced his persuasiveness. The public expected to see a rough design “scheme” that would then be revised based on the Library staff’s and their own comments. Koolhaas offered instead a “whole vision very early and all at once.”¹⁰

One critic commented on Koolhaas’s [**SLIDE 30**] “methodical way of presenting the design that makes it seem plausible, if not inevitable.”¹¹ The representation became the reality. The reviewers and the public, then, faced with a presumably complete design, were left to question the worth and possible impact of their feedback. They were “too timid to do anything but ask small questions”: “How much Windex do you need to clean the glass walls? Can you see up a woman’s dress through the translucent floors?”^{12,13} The designers’ rhetorical skill seemed to disarm the public. A local journalist claimed to have a “warehouse of input from card-carrying library users who want to speak up, but worry the Big Idea has too much momentum to slow down for good advice.”¹⁴

Koolhaas and Mau’s expertly rendered images seemed to an uninitiated public not representations, but realities. The ontological and epistemological biases of the

visualization tools they had at their disposal we have yet to investigate. According to Archigram member David Greene, [SLIDE 31-- Minneapolis] “What was not actively realized...years ago was that technology would present the designer with a tool that could in quite a literal sense *create* photographs. Photographs of reality and the ‘yet to be’ become now indistinguishable.”¹⁵ This indistinguishability can have a devastating impact on public design processes. Visualization techniques and technologies can simultaneously empower and marginalize.

To prevent this marginalization – to allow visualization techniques to empower multiple publics to contribute meaningfully to design – changes must be made on several levels. First, on the macro level, we need nothing short of a cultural shift: the defetishization, demystification of the image. I can’t claim to have the solution to such a pervasive problem – but perhaps a public better [SLIDE 32] versed in image **creation** will be better equipped to critically interpret the thousands upon thousands of images it perceives every day. Perhaps a design education requirement, beginning at the primary school level, will make students aware of the constructedness of the image – just as, through spelling and phonics and grammar, they are made aware of the constructedness of verbal language.

Designers, too, would do well to consider the biases – a concept developed by Harold Innis, Marshall McLuhan’s mentor – of their visualization media. A recent article in the *New York Times* addressed the differences in bias between architectural media. According to one architect and renderer, [SLIDE 33] “a hand-crafted rendering better conveys the sense of an evolving idea than a digital image,” which implies a complete, polished design. “What I really, sincerely try to do,” he said, “is have the viewer sense what the building might feel like rather than what it looks like.” Such a rendering – more evocative

than definitive – conveys the possibility of change, and thereby empowers the public to effect that change.

The literalism of “photo-realistic” [SLIDE 34] digital images, by contrast, encourages the viewer to conceive of the building as if it were already *there*, complete, *real*. A digital artist explained to the New York Times reporter that a digital rendering “is essentially made of layers of information”; the artist can select features on a pop-up window to show or suppress shadows, pathways, people, landscaping, etc. But it’s important to remember that the *choice of medium* is itself one of those layers of information. The choice [SLIDE 35] between a blueprint and a watercolor rendering is also a choice between sets of information and audiences – one conveys specific information to a specialized audience, while the other conveys different information, but to a broader audience. It’s also a choice between connotations – one conveys “construction document”-level completion, while the other conveys “brainstorming”-phase flexibility. The choice between a mock-up of a particular design element, and an animated “walk-through” of that element is also a choice between empowering the participant to experience and evaluate, and allowing mediated, cinematic experience to persuade.

Visualization and experientializing techniques – computer rendering, modeling, making mock-ups, for example – each carry their own biases. But by accommodating multiple audiences’ varied ways of seeing and experiencing a design concept, designers can grant themselves the privilege of working with a better informed, empowered, engaged, and perhaps open-minded public. Ultimately, a multimedia design process, sensitive to varied epistemologies and multiple intelligences; and a public less enamored with the image, a public aware of visualization techniques and technologies, will allow for a fruitful, perhaps

transformative, interaction between the makers and users of public space – and a public realm better able to empower its inhabitants.

¹ Stanley King, proponent of “co-design,” argues that the public brings insider knowledge to the planning table; they can help developers to understand a community’s ways of life, its daily activity schedules, its customary circulation patterns, its insider politics; they can share community memories and site values.

Geographer Edward Relph writes, “There is also a conceptual reason for community involvement in place design because the essential characteristics of place derive precisely from such involvement.” “Failure to attend to the needs and wishes of established populations,” he says, “can only result in resentment, political confrontations, awkward compromises, and poorly realized designs.”

² Kheir Al-Kodmany, *Journal of Architectural Education*

³ *Ibid.*

⁴ John Pickles, *Ground Truth*

⁵ In Denver, the mismatch between architectural image and reality was not simply a matter of disappointment: in this case, the misreading of plans has resulted in a dysfunctional building. According to a city librarian, staff were invited to review architectural plans throughout the design process and to provide feedback to the architect, Michael Graves – but when the building construction neared completion, it became clear that the physical reality didn’t match the mental image they had derived from the plans. The staff had called for an open plan – one with broad sight lines, allowing for few librarians to monitor the activity in large areas, and flexible space, allowing for the easy rearrangement of materials and furnishings as collections grew and media evolved. What was *realized*, whoever, were rooms full of columns – a element of Graves’ signature style. It turned out that all those little circles dotting each room in the plans – a notation, according to one librarian, of which the staff was unable to make sense – those little circles denoted columns. If only the staff had been more familiar with the code of architectural notation, they could have acknowledged that the real building that those blueprints forecasted would not suit their purposes. As a result of this misreading, Denver’s librarians find themselves working in an environment with limited visibility and flexibility.

⁶ Matthew Stadler, personal interview, 17 October 2002.

⁷ *Ibid.*

⁸ “Kool With Koolhaas,” *Seattle Times* (28 May 1999).

⁹ Architect Neil Leach writes: “When meaningful discourse has been absorbed and rendered impotent within the depthless, aestheticized world of the image, seduction” – or, in this case, seductive taunting – “remains the only viable strategy for winning over the viewer.”

¹⁰ “Glowing Lantern of Glass,” p. E1.

¹¹ Olson, “How Seattle Learned,” p. 125.

¹² Nielsen, “Library Lovers,” p. B4.

¹³ “Glowing Lantern,” p. E1.

¹⁴ Susan Nielsen, “Library Lovers Speak Out: Rem, We Just Want to Help,” *Seattle Times* (23 January 2000): B4.

¹⁵ David Greene speaks of the architectural photograph as “not a photograph of the building but the building itself,” when in actuality “the fact of the photograph does not in itself signify the existence of that which is being photographed, although it may signify the existence of the idea of the object.”