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Veiled Sustainability: The Screen in the Work of Fumihiko Maki

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Top: View to the Gender Equality Center (GEC) from Nihonmatsu Castle.

Bottom: Ukiyoe print of a village at the base of a mountain with a Shinto Shrine in the distance.

Opposite Left: Entrance into the brick base with the screen above.

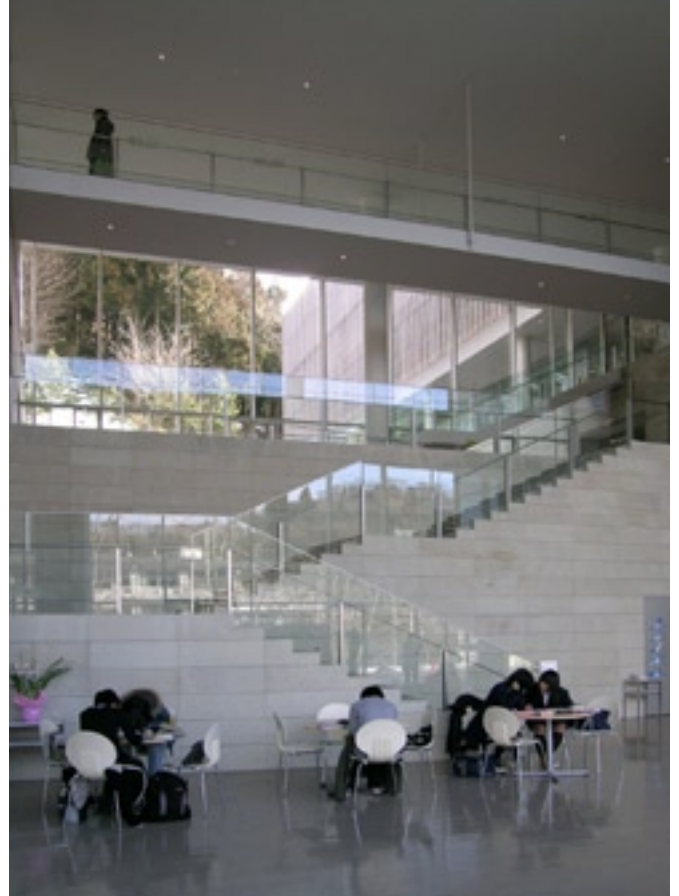
Opposite Right: The GEC cascades up the hill, beckoning the visitor ever deeper into the building.

Recent articles have applauded the sustainability of Fumihiko Maki's architecture due primarily to his use of screens.¹ Ultimately, however, such arguments represent a misreading of intent. In this age of "green-washing," architects often rationalize screens or sunshades as evidence of their buildings' sustainability. But Maki's buildings could rarely be considered sustainable by such measures as energy consumption, carbon emissions, or waste reduction.

Instead, Maki's buildings embody a different kind of sustainability—one that lies not in their technical performance, but in the conceptual overlays that imbue them with meaning. While Maki's screens do block the sun, and

consequently reduce the need for air conditioning, he does not conceive them as purely energy-saving devices. Rather, they derive from concepts that embody cultural, religious, social, spatial, material, artistic, technological, economic and humanistic ideas.

To illustrate the complexity of Maki's thinking, this article refers to a number of his designs. His use of screens on the exterior of the Gender Equality Center (GEC) in Nihonmatsu will serve as a particularly important touchstone, however. The GEC is a multiuse community center in a small town 250 km. north of Tokyo. Set on the northern slope of a forested hill, it faces the distant ruins of a fifteenth-century castle across a



populated valley. The two pieces of monumental architecture form a poignant dichotomy between the old and the new.

The GEC rests on a heavy, brick base, up which a series of public spaces step steeply and extend out to a courtyard. But seeming to float above, its fourth and fifth floors are enclosed by a delicate screen of aluminum and wood louvers. The vertical louvers cloak a variety of functions, from seminar rooms and research labs to guest rooms. Apart from their material presence and technical performance, the louvers reflect deeper meanings rooted in traditional Japanese conceptions of space. They show how “sustainable” elements can be integrated

into an architecture that is also culturally resonant and aesthetically refined.

Traditional Sources

Maki’s intellectual flexibility allows him to reference various sources during his process of design. Some concepts such as inner space, veiled space, and relational space are uniquely Japanese, and were the conceptual starting point for Maki’s explorations with screens dating back to the 1970s. Others, such as atmosphere, symbolism and composition derive from Maki’s Modernist training. For the sake of clarity—and at the risk of oversimplification—I will try to separate these strands. In reality, while he is designing, Maki superimposes,

adds and subtracts such sources in an expedient fashion until he is satisfied. It is only when the work is done that one can rationalize this inherently irrational process.

Fundamental to Maki’s notion of space is the Japanese concept *oku*. There is no completely analogous word term in English. *Oku* connotes a mysterious depth or symbolic, unattainable center; it refers less to a measurable distance than to a metaphysical dimension, and can apply on many scales, from city to shrine. To describe the concept, Maki’s 1979 book *Miegakure Suru Toshi* referred to the paradigmatic Japanese village located along a river valley at the base of a forested mountain.² For the vil-



lagers, the mountain is imbued with a spiritual life, but it is not a place or a spirit that can be known. The mountain is a mysterious part of the collective unconscious, evoking a mystery that is neither sinister nor benign. It only lurks, and its presence constantly reminds the villagers that something unknowable lies beyond.

Many of Maki's designs incorporate the idea of *oku*, and screens are often used to choreograph the experience. For example, unlike typical architectural promenades that end in a climactic space, Maki's promenades often hint at something beyond without allowing the visitor direct contact. Thus, Maki's design for the Kaze-

no-Oka Crematorium guides visitors along a prescribed route where screens deny direct access and view but provide hints of an inner sanctum.

At the GEC, light emanating from behind the louvers hints at something within, but the screen does not allow direct visual access. Thus, as he or she mounts a series of ramps and stairs, a visitor catches glimpses of the spaces; but it is only after ascending all four stories that it is possible to occupy these mysterious spaces. By then, the inner experience has shifted, however, and it is the city (to the north) and the mountain (to the south) that lurk behind the louvers.

Closely related to *oku* is another

Japanese expression, *miegakure*. Literally "to glimpse something that is hidden," such as the moon passing behind clouds, it is a concept that embodies both the ephemeral and ambiguous. Maki explains it as the abstraction of an experience completed only in our minds. For instance, it is the white undergarment beneath the collar of a kimono that seduces the viewer into imagining what lies beneath—or, as Maki frames it for a Western audience, the lace negligee that hints at the shape of a naked body, without revealing it.

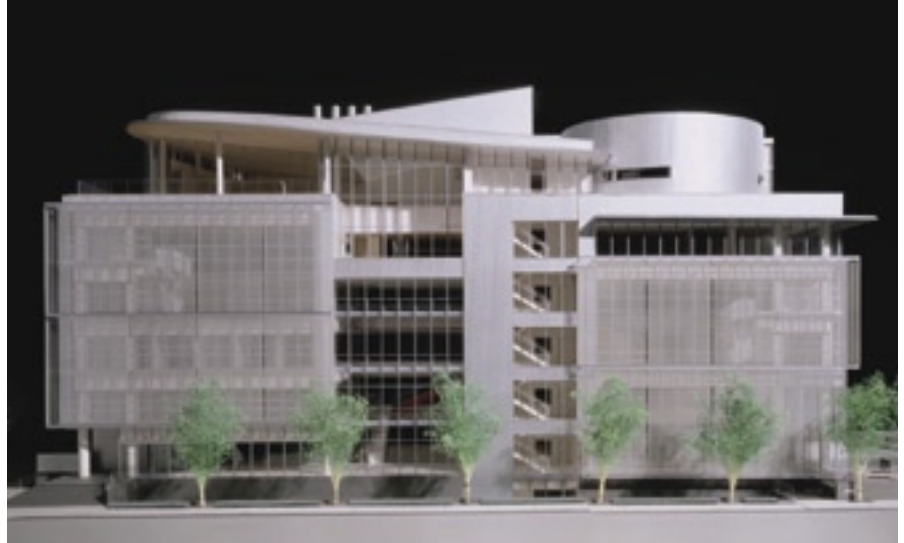
Maki also describes the elements of Japanese cities as veiled. Thus, screens may allow cursory glances to

the interior of a store while preserving the privacy of the patrons therein. Meanwhile, inside, the visitor finds refuge from the chaotic city while still being connected to it through the slits in the louvers. The GEC is designed to produce a similar effect. Especially as one walks parallel to the facade, the 24-cm. openings between louvers veil the private, interior realm.

Maki's design for the foyer of TEPIA, an exhibition pavilion for new technology, also explores this traditional Japanese notion of veiled space. Here, finely perforated metal panels are suspended from stainless steel cables to form an updated kind of *shoji* screen that filters views to the city from the interior, and views to the foyer from the exterior.

A third Japanese concept that has influenced Maki's architecture is *ma*. This is best understood as relational space, or the space between things. A *The New York Times* article once reported that when researchers asked schoolchildren from America and Japan to describe the contents of a fish tank, the American children described the individual fish, whereas the Japanese children described the relationships between them.³ This propensity is the basis of *ma*.

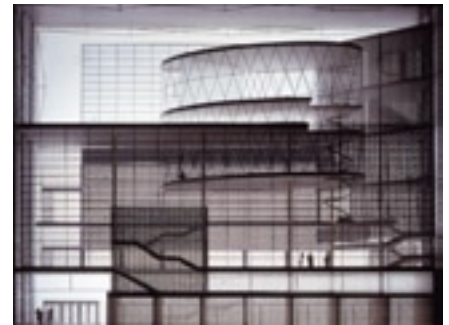
In a 1964 pamphlet, *Investigations in Collective Form*, Maki offered a version of this concept for modern times. In particular, he proposed a humanistic urbanism that advocated incremental, informal, open-ended urban growth as opposed to the megastructures that dominated architectural discourse at the time. The key, he wrote, was to emphasize transport nodes and public corridors. "Urban design is ever concerned with the question of making comprehensible links between discrete things. As a corollary, it is concerned with making an extremely large entity comprehensible by articu-



lating its parts."⁴ For Maki, the key to a humane urban environment is not just the quality of the individual buildings, but the quality of the spaces between.

Such concern permeates Maki's architecture at all scales. For example, in his competition entry for the Salzburg Congress Hall, he used mesh screens to enclose discrete elements, but the elements were amalgamated to produce coherently figural interstitial spaces. These transitional spaces extended the public network of streets into the building both visually and physically. The differing degrees of public exposure could also be "read" from the exterior, as successive layers of screens overlap to produce increasingly veiled space. And at the core of the building, this opacity was consolidated figurally as the building's *raison d'être*: the Congress Hall.

The GEC accomplishes similar goals through subtler means at a variety of scales. At a macro scale, the screens articulate a thickened threshold between city and nature. At the building scale, the louvers define two primary program areas within its

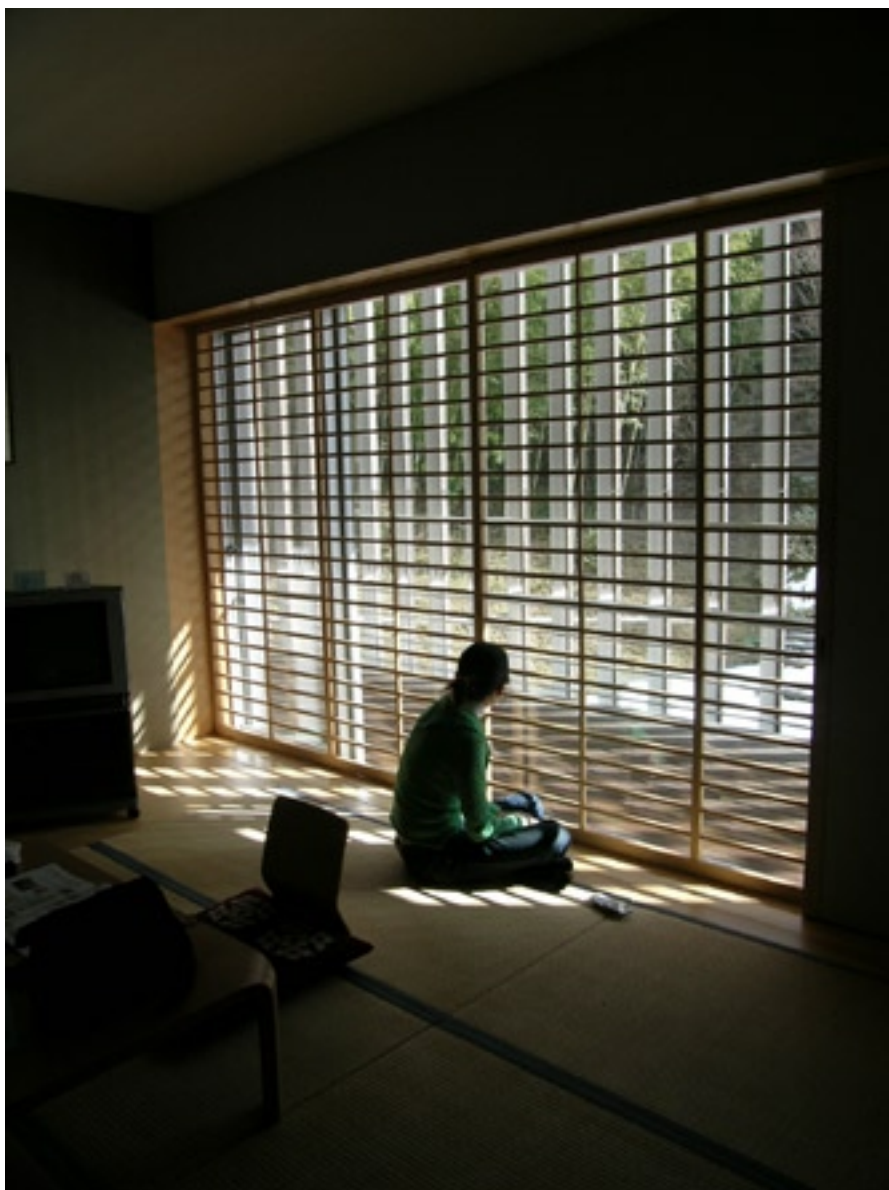


overall L-shaped design—its administrative and residential wings—while relating them through a common design. And at the scale of the individual rooms, the louvers negotiate the transition between primary space and the outdoors in diverse ways depending on scale and the desired level of

Opposite: A perforated metal screen filters views in and out of Tepia.

Top: The MIT Media Lab's facade is composed of a transparent glass atrium flanked by the private, screened space of the laboratories.

Bottom: Screens in the Salzburg Congress Hall Project were planned to define discrete forms as well as the spaces between.



privacy. Thus, the vertical louvers accentuate the grand, double-height volume of the guest room foyer, but they also relate more intimately to the smaller scale of the guest rooms by enclosing a narrow, outdoor terrace.

Other Sources

Maki's insatiable curiosity, coupled with his prestigious and international background, has led him down various avenues of thought. In addition to Japanese influences, Maki has always been a participant in contemporary

"In architecture you can start with anything; in the end, it must be a piece of architecture as you'd like to see it." - F. Maki

architectural discourse. When examining his design approach, it is not easy to isolate the various sources; references to Bachelard are as likely as those to Basho.⁵ Maki's treatment of screens is likewise subject to influences beyond the uniquely Japanese.

One of the primary determinants of Maki's design decisions is the kind of architectural quality or atmosphere he is trying to produce. He describes this in terms of a palette of options: cool/warm, high-tech/homey, slick/earthy, abstract/articulated, light/massive, shiny/textured, etc. Maki is not dogmatic about these choices: "Which option to choose for a given project depends on the client, the site, the budget.... In the end, it is the enrich-

ment of space that is more important than selling an image."⁶ He candidly admits that many of these decisions are based merely on the client's, or his own, personal preferences.

In this sense, the exterior screen on the GEC has various spatial functions, but it also plays an important atmospheric role. The louvers are designed as pinwheels of aluminum and wood so that the feel of the building changes as it is experienced from different places. Maki felt that an all-metal screen would have created too imposing an edifice, while an all-wood screen would have been a fire hazard. Therefore, he developed a hybrid solution that combined the strength of metal with the warmth of wood. The use of wood also echoes the forest backdrop, so that the screen conceptually bridges between the urban and the natural.

The wood lattice in the Toyama International Conference Center accomplishes similar objectives. Here, the wood glows as it modulates the sunlight entering the foyer. As seen from the outside, however, the lattice also mediates the high-tech appearance of the metal-and-glass building, by producing a secondary reading of the facade, and providing human scale for a monumental edifice.

Maki sometimes refers to his screens as "signs"—billboard-like elements. Most contemporary modernists would downplay the influence of 1980s postmodern theory; however, Maki readily acknowledges the symbolic function of architecture. For example, the GEC's unique hybrid louvers are an easily recognizable feature of this important public building. At night, in particular, they allow it to glow at the base of the dark, wooded hill—and provide symbolic reference of the institution's modernity.

The Graduate Research Center

at Keio University uses a perforated metal screen to similar effect. During the day, the stainless steel glitters in the sun and stands in stark contrast to the surrounding concrete campus. At night, Maki intended the building to glow with a cool, green light that would symbolize the 24-hour occupancy engendered by its international research agenda.

Contemporary architects also tend to scoff at the role that traditional aesthetics play in their design processes. Maki, however, will readily rationalize formal decisions based on “composition.” The design of screens is no exception.

With the GEC, Maki strove to construct a base that was “of the earth,” and a top that was “of the sky.” The bottom two stories are clad in brick, the third story is recessed, and the screen facilitates the apparent dissolution of the fourth and fifth levels into the air. Meanwhile, a vertical void cuts through the middle of the building, signaling the public space that climbs up through it. This design approach of a fully-glazed, central atrium flanked by screened “programmed” areas is a common strategy for Maki. One can also see it in his design for the as-yet unbuilt Media Lab at MIT.

Maki’s approach to screen design, like the overall design of his buildings, places emphasis on technical performance. The GEC’s louvers were necessary, for instance, to shield the glazed facades from excessive solar heat gain. The louvers are especially effective in conserving energy in the southwest-facing research laboratories. However, the heat gains and losses allowed by the expanses of glass would seem as much a concern as the solar radiation shielded by the louvers.

This is a common theme in Maki’s use of screens. Because many of his buildings have glass facades, they

would be uninhabitable if left unprotected from the sun. The screens, therefore, are less a gesture toward energy conservation than a response to the pleas of mechanical engineers for help.

The Tokyo Church of Christ is a case in point. Here Maki designed a light-filled sanctuary that faced west onto a noisy boulevard. This created difficult problems of heat gain and sound insulation that needed to be addressed head-on. Maki’s solution was an innovative trombe wall using fiberglass mesh and fritted glass to filter excessive sound, heat and light. The resulting composition glows at twilight, giving life to the setting sun instead of spurning it.

Subhead

Maki recognizes that sustainability is one of the major issues in contemporary design. But, he adds, “while some people say it is the most important thing, I think it is just as important as other issues.”⁷⁷ In fact, Maki tends to consider sustainable design a technical issue requested by enlightened clients; absent such a requirement his buildings rarely achieve significant reductions in energy use, waste production, or carbon dioxide emissions. Furthermore, the mostly glass facades typically lead to high energy use, and his favored materials such as stainless steel and anodized aluminum are environmental liabilities.

While Maki’s architecture might not conform to the standard conventions of sustainable design, however, there may be more important considerations. Given the resources that go into constructing, demolishing and replacing a building, its longevity is a key element of its sustainability. One may even argue that sustainable architecture is that which endures because it is valued. And in this regard, the

rich overlays of meanings in Maki’s designs are key to his buildings’ long-term appeal.

Maki sees the complex technical challenges faced on most projects as opportunities for his architecture to reflect society. The GEC’s louvers embody the Japanese cultural constructs of inner space, veiled space, and relational space. They are comments on the natural and artificial, the forest and the city. They produce an atmosphere of welcoming warmth, and high-tech, cool precision. They are a symbol for a modern, public institution. They compose the building’s facades from without, and frame views from within. They also protect the building from the sun.

To say that these louvers are merely sunshades is to misunderstand the architecture. Maki is a world-class designer, not an environmentalist, and his conceptual approach opposes the tendency to design architectural elements as single-functioning accessories. His screens are part of an integrated architecture that embraces the complexities, ambiguities and multiplicities of modern life in order to generate unique and enriching places.

Notes

1. For example, “Control of Vision and the Environment,” *Techne* 1 (February 2004), pp. 11–17.
2. Fumihiko Maki, *Miegakure Suru Tosbi* [in Japanese] (Tokyo: Kajima Publishing Co., 1986).
3. Erica Goode, “How Culture Molds Habits of Thought,” *The New York Times*, August 8, 2000.
4. Fumihiko Maki, “Investigations in Collective Form,” *The Japan Architect* 16 (Winter, 1994), pp. 265–67.
5. Gaston Bachelard was a twentieth-century French poet, philosopher and scientist. Matsuo Basho was a seventeenth-century Japanese poet.
6. Fumihiko Maki, interview with author, October 23, 2004.
7. *Ibid.*