Ando's Modern: Reflections on Architectural Translation

Tadao Ando designed a sublime building for the Modern Art Museum of Fort Worth. As built, it's merely great.

BY RICHARD R. BRETTELL
Ando's competition model was a series of eight gorgeous lacite lozenges (four of which were connected longitudinally in pairs to form six bays), floating on a blue reflective surface. Its shimmering ambiguities of surface combined with its lucid geometry to be utterly compelling, and most viewers of the model attempted to "visualize" it as an actual building with little success. Ando's basic idea was a museum of parallel two-story concrete galleries, 24 feet wide and 144 feet long, each encased in glass (roof included) and topped by a horizontal "brise soleil," or sunscreen, to modify the extreme Texas light. The sunscreen itself was not delineated and appeared in different forms in various drawings. The ends of the gallery roofs were supported by Y-shaped columns placed inside the glass wall, with vertical members of concrete and diagonal members of steel.

Between these concrete galleries, Ando proposed 40-foot-wide bays given architectural form by non-structural walls, presumably covered in practical painted sheetrock. Most of the drawings made in connection with the competition dealt with the relationship between concrete, glass, and reflecting water on the north and east sides of the L-plan building. Few details of the facade facing the Kimbell were apparent. Ando, unlike his countryman Isozaki, allowed the Modern's building to be taller than its distinguished neighbor and to face south, rather than west toward the Kimbell, effectively undercutting a face-to-face comparison.

The entire effect of the model was of floating pavilions that were, in themselves, reflective, and, thus, markedly different from Ando's by-now familiar architecture of massive concrete walls intersecting with the ground and horizontal sheets of water. In the original plans for the Modern, the only direct meeting of concrete and water occurred in the oval restaurant pavilion, which pushed from a glazed pavilion into the water with a Corbusian force. The competition drawings also suggested that the second-floor...
The entrance facade, composed of glass and aluminum panels.

An elevated sculpture terrace offers a view of Vortex by Richard Serra.

First-floor plan. 1) Entrance hall. 2) Shop. 3) Auditorium. 4) Cafes. 5) Parking. 6) Galleries. 7) Storage. 8) Loading. 9) Workshop.

Second-floor plan. 1) Offices. 2) Sculpture terrace. 3) Classrooms. 4) Galleries.

galleries would be lit with natural light from above, in the manner familiar to students of Beaux-Arts painting galleries. Those on the lower galleries would, presumably, be artificially lit with natural light leakage through doors and light wells and from the glazed viewing platforms in between the concrete gallery structures and the side light reflected off the water through the curtain wall. Ando also separated art from life by confining the galleries to four parallel bays, while all social, administrative, and educational functions were arranged in two longer entrance bays. In fact, the entire effect of the building was of transparent metal "roofs" floating above million-less walls of glass, through which one could see the concrete structures. Nothing like it had appeared in Ando's published work. Clearly, the chance to conceive a large-scale museum across from Kahn's Kimbell inspired Ando to new heights of visual poetry.

Ando's competition entry for the Modern was a building opposite in character from its esteemed neighbor. The effect of the Kimbell is of a solid building with very small slits for light. Ando's submission was a completely open building of metal and glass. In this, one thinks immediately of the first internationally important museum building in Texas, Mies van der Rohe's addition to the Museum of Fine Arts, Houston. The Brown Pavilion placed contemporary art in a curved, glass-walled structure that appeared to float — not on water, but on a recessed limestone base. Another nod to Houston was the echo of Renzo Piano's buildings for the Menil Collection. Both these buildings have glass roofs under or over which Piano positioned floating sunscreens to control the intense Texas sun. Also, in the case of the building for the Menil Collection, Piano separated art from life in a manner comparable to that of Ando. Ando effectively subsumed in a single building the materials and architectural solutions of the very best art museum buildings in Texas.

How Ando's Competition Designs Became an Actual Building

The day after Tadao Ando was hired as the architect for the Modern, the board of trustees hired a prominent project manager to work with Ando. This man, architect Peter Edward Arendt, had performed a similar function for the developers of Dallas's Crescent Court, designed by Johnson/Burgee, and more recently, for
Cleveland's Rock and Roll Hall of Fame, designed by I.M. Pei. In each case, Arendt effectively acted as an informed intercessor among three forces — the architect, the client, and the contractor. For the Modern, the latter, Linbeck Construction of Houston, was selected early in the process, and this decision was one of the only controversies associated with the building. Linbeck is a well-respected firm for large-scale commercial construction, but the company is not primarily known for its work with major architects. Many devotees of architecture in Dallas-Fort Worth had assumed that the revered local firm Thomas S. Byrne, which had built the Kimbell and important Dallas buildings by Steven Holl, Richard Meier, and Antoine Predock, would have received another much deserved job. This did not occur, and in conjunction with the appointment of Peter Arendt, the retention of Linbeck signaled the Modern's decision to maintain local control of the project through Arendt and to insure that it was cost-effective through Linbeck.

Ando's poetry ran the risk of becoming prose as the building went from concept to reality. That this happens frequently in architecture will come as no surprise to anyone. That it happened in Fort Worth — with its major buildings by Johnson, Kahn, Pei, Rudolph, and others — came as a surprise to many. The complex process of transformation was well underway when the tornado of 1999 swept through Fort Worth, just missing the Culture District and the building site of the Modern, but devastating glass-clad buildings throughout downtown and the area between downtown and the museum district. Wind destroyed entire sections of industrial curtain wall, and the storm's proximity to the museum must have been chilling to many donors who had already made substantial pledges to the completion of Ando's privately financed, glass-wrapped building.

What happened as a result of all these factors is that Ando's design changed in subtle but profound ways. A simple list of the most notable changes will suffice:

- The floating metal sunscreens over the glass roofs in the competition design became virtually solid planes of concrete with small perforated sections and slits virtually invisible to the viewer. The entire system of skylighting was transformed as a result of the decision to jettison the glass roofs of the original design.
- The essentially mullion-less curtain walls of the competition drawings (with no horizontal and very thin vertical members) became a standardized wall system with a large cage of aluminum mullions, including two prominent horizontal mullions, supported by coated I-beams, all of which protrude significantly from the plane of the glass — both inside and outside.
- The glass in the curtain walls was significantly reduced on the south and west walls facing the Kimbell. A system of aluminum panels replaced the glass.
- The Y-shaped supports for the roof were transformed from those described above, located inside the curtain wall, to very large reinforced concrete elements cast in two parts and located outside the glass wall, hence becoming major elements of the building's image.
- The parking garage beneath the administration/education/entrance bays was replaced with street-level parking.
- The six bays of the original design (two of double length), the same number as the bays in Kahn's Kimbell Museum of Art, were reduced to five.

The effect of these changes is greater than one might think. A building that was essentially light in character became heavy, more opaque, and more structured. A concrete plane replaced openwork metal for the roof; in the original vision, light would permeate the building from the top; in the revised version, none appears to come through. Thin horizontal planes of glass, almost free of apparent support and with no structural function, became a large aluminum-and-coated-steel grid, in-filled with glass and aluminum panels. To many viewers, the grid seems to support the cantilevered concrete roof. The concrete Y columns became dominating forms in front of glass, rather than the concrete-to-metal, tree-like supports of a transparent metal screen. As drawn in the competition designs, the Ys literally represented a tree, with a cylindrical trunk of concrete, twin branches of steel, and leaves of metal floating on a grid. As built, there is a touch of the Gothic in the angle, and the redesigned elements read almost as buttresses of the roof, which becomes a thin concrete plane against the weight of the sky. At this stage, it is important to consider the reasons for the transformation of Ando's glass pavilions. Peter Arendt...
graciously met with me to discuss the period of translation. One of the Modern’s earliest decisions was to mix the wrap-around glass, which was neither energy-efficient nor good for the protection of light-sensitive works of art. An aluminum panel was selected as a material that would have the visual character of glass, but would be opaque and energy-efficient. It seems that the panel’s proportions determined the character of the curtain wall. Therefore, the glass panels took on the same vertical proportion as the metal panels, necessitating Ando’s design of a consistent grid with two horizontal Mullions (to create a tripartite vertical division) to contrast with the doubled aluminum panels. Then, due to reasons both of energy and light requirements, the glass itself became a triple sandwich. To support this weighty element, Ando elected to use Miesian H-section Mullions. Because these Mullions were directly attached to the aluminum grid, they had to be coated with an aluminum-colored surface so as not to clash chromatically. These two systems, when combined, produce a structure of such visual dominance that the glass itself seems caged.

In the weeks after the Modern opened, many visitors wondered about the visual weight of the Mullions. I have asked several architect friends about alternatives such as the Pilkinson System, a curtain-wall system used often by I.M. Pei and Edward Larrabee Barnes. It consists of sheer vertical sheets of thick glass separated by glass Mullions set at right angles. The glass walls in the double-height lobby of Harry Cobb’s Fountain Place in Dallas and of Barnes’ Carnegie Institute of Art in Pittsburgh are virtually the same height as those of Ando’s museum in Fort Worth and maintain the shimmering weightlessness that Ando sought. Yet the Modern’s staff and trustees’ desire for optimal conditions for the conservation of works of art (in terms of ultraviolet light and temperature gradients) ruled out an architectural solution in keeping with Ando’s original design. The necessity for opaque panels and for a thick sandwich of variously coated glass made Pilkinson’s system — acceptable in Pittsburgh’s cooler climate — unacceptable in Fort Worth. This logical interest in the preservation of work of art in optimal conditions drives much of current museum design. Perhaps the day will come when someone with authority in art museums will question the ultimate wisdom of this approach and think as much about the optimal viewing conditions of works of art as about their millennial survival.

Another absolute rule of architectural development in the automobile-obsessed United States is that any institution must provide easy-to-find and well-lit parking accessible to the entrance. This has lead urban art museums into contrastor real-estate deals and, in certain cases, to build their own parking garages. Several of the competition entries to the Modern proposed underground parking, and like the others, Ando protected the primacy of his architecture from the visual pollution of the automobile by designing covered parking under the administrative/educational/social wing. This decision would have ensured that the Ando building was viewed from a landscape podium on the west and south to counter the watery “anti-podium” to the north and east. It would also have rhymed with Kahn’s skillfully disguised exterior parking, which is completely invisible from the street. (It is interesting to note that Kahn too had originally designed the Kimbell with underground parking, but in his redesign, managed to hide it.) Ando’s redesign is not so felicitous. For a series of highly practical reasons, the Modern’s parking was placed out-of-doors on both the west and south sides of the building. Thus, a visit to The Modern has the comforting familiarity of a visit to one’s doctor or accountant in a suburban office complex.

Just as the exterior of the building was transformed during the process of translation, so too were the interiors, particularly the galleries. Ando’s competition envisioned a clear alternation of 24-by-144 foot concrete buildings placed 40 feet apart with larger-scale intervening spaces that accommodated freer internal partitioning. This alternation of confined rooms and free space was intended to give the building
an architectural rhythm that permits the installation of works of varying scale, style, and material in spaces appropriate to them. It was also designed both to break up and to organize exhibition conditions so as to minimize museum fatigue. On the upper level, this double nature was stronger because of the alternating systems of natural light that are, to my mind, the most important contribution of the building to gallery architecture. The confined galleries are lit directly from above, and the light filters through a curved, opaque glass ceiling light that fills the ceiling completely. By contrast, the long east-west walls of the free spaces (those outside of the confined galleries) are lit by rows of clerestory windows, the light from which is directed onto the walls by curved surfaces based on the traditional coves of Beaux-Arts galleries. Hence, the ceiling in these larger, freer spaces seems to be suspended between planes of a light-struck wall and is dark by contrast with the pure light ceiling of the gallery rooms.

Ando intended normal shifts in natural light to enliven the interplays of light-to-dark ceilings and naturally-to-artificially lit walls. Any visitor to the naturally lit galleries in Kahn's Kimbell museum experiences shifting light temperature and direction as the day progresses and clouds drift across the sky. Due to the rigorous intervention of the Modern's light consultant, George Sexton, the natural light of north Texas has been so effectively filtered that it is difficult to experience as natural light. Sexton developed a stunningly simple "double gradient" of apertures for natural light above the opaque glass ceiling lights in the second floor galleries. These vary gradually from minimum to maximum apertures as a direct result of the screen's distance from the light source—a long slit in the roof, invisible to the viewer and similar in scale to that in Kahn's Kimbell Museum of Art. This system results in light of almost complete uniformity and chromatic temperature, making the ceiling seem to many visitors as if it is artificially lit. In the gallery spaces, where the other system of light is a clerestory, there is a good deal more sense of variable natural light.

On both the lower and upper floors of the galleries, all the wall surfaces on the interior of the concrete buildings are white-painted sheetrock, like those in the Menil Collection and the Dallas Museum of Art. There is little attempt to differentiate between the concrete buildings so fetished on the exterior and the intervening spaces. This is a pity, because, had the exterior walls of the concrete buildings remained concrete, works of art could hang easily against them, as they do against the travertine of the Kimbell Art Museum, and be washed by the natural light from the clerestory windows. The rare places in which works of art do hang on concrete (on the second level off the sculpture garden), they look superb. Instead, the museum's consistently white walls homogenize an experience that the architect intended to be differentiated.

This is particularly problematic on the lower level, where the differences of ceiling treatment caused by skylights and clerestory windows are nonexistent. I also found the partitions of the free spaces to be more intelligent and architecturally integral in the competition plans than in the final building. It is likely that the explanation for this regularization of gallery wall surfaces was a demand of the curatorial staff, who wanted uniformity so that they could install work with maximum flexibility. If so, this is a pity. Uniformity and flexibility are not qualities of great architecture.

In the press and among visitors to the Modern, there has been much discussion about Ando's mastery of concrete. The tales told by the staff, docents, and other tour guides about the expensive Finnish plywood forms are now legend in the area, and visitors know to caress Ando's silky walls. The tactile effect is extraordinary, even to those of us who knew Louis Kahn and who had the chance to work with him and the form workers at his various projects. Kahn's
waxed plywood forms, his lead plugs, and his insistence on sharp corners must be the source for Ando's even more refined systems of pouring and freeing the walls from the molds. Yet, to the eyes of many who have visited other Ando projects, the problem with the concrete at the Modern is neither its surface texture nor its razor-sharp corners, but rather the color and its consistency throughout a wall. Texas is filled with concrete buildings of real refinement (Pet's Dallas City Hall and Johnson's Thanksgiving Square Chapel, for example, are extraordinary in color, consistency, shape, and line). For that reason, and because of the proximity of the Kimbell Art Museum, it is possible to wonder about Ando's obdurate, and to my eye, deadening mid-value cool gray color. Also, in numerous instances the building suffers from visually disruptive color variations within the wall. If the building had a béton brut quality, such chromatic differentiation would be desirable. But in a building of such overarching refinement, such accidental-looking variation doesn't work to the building's advantage. The Pulitzer Foundation and Ando's wonderful house in Chicago have concrete walls both lighter in color and more consistent than that in Fort Worth. Ando's Museum in Context

The Modern's monumentality and architectural ambition must be considered in relationship to the architectural traditions of the modern-art museum. In 1939, the New York Museum of Modern Art erected its first building, whose high modernist street façade protected artificially lit galleries with low ceilings. This building's system of small rooms, non-load-bearing, brightly lit white walls, and efficient staircases came to be associated with an aesthetic of the Modern. In many ways, the rooms of the Modern, as first installed by Alfred Barr, led to the white-walled commercial galleries of '40s and '50s New York. This domestically scaled and unpretentious form of modernism persisted in the design of spaces for modern art throughout the mid-century and was broken in 1959 by the brilliant entry of Frank Lloyd Wright's late masterpiece for the Guggenheim Museum (which he originally designed to be reddish-brown!). For Wright, and for his patrons and their advisors, modern art constituted such a fundamental break from historical art that it needed spaces as experimental as the art. New York became a battleground in the fight between the cool, modestly domestic and neutral modernism of MoMA and the architecturally aggressive modernism of The Guggenheim.

Generally, modern art museums in the United States have followed MoMA's model of restrained elegance and modesty. To this has been grafted a tradition of placing contemporary art in raw spaces created for industrial use in the 19th and earlier 20th centuries, and this trend, started in Europe, now plays well internationally. The rationale of both neutrality and rawness is that experimental modern art is best seen in spaces that are adaptable, inexpensive, and well proportioned. The quality of light and the neutrality of color are more important than an interactive architectural character or an interplay between the formal qualities of art and those of architecture. The other subtext of this notion is that modern art is not to be associated with bourgeois luxuries and thus, with the decorated interiors of what might be called the Beaux-Arts museum.

During the past generation in both Europe and the United States, modern art has so completely triumphed over Old Master paintings in both the market and the public imagination that museums designed to house it began to enable modernism. When considered as a group, the recently completed museums of modern and contemporary art in San Francisco, Los Angeles, and Chicago (or, outside the country, in Maastricht, Hamburg, or Monterey), have become modernist palaces raised on podiums that are, in effect, Beaux-Arts museums without the ornament. If modern or contemporary art is housed in buildings of this splendor and ambition, surely this art must be as great as that of the Old Masters. Pollock, Rothko, Sherman, and Kiefer become Raphael, Rembrandt, Poussin, and Chardin. It is clear that the Modern in Fort Worth is part of this tradition of ennoblement. Of all the buildings in the competition, Ando's was the most architecturally ambitious and the most monumental. Yet far from being aggressive, Ando's building has a serenity and subtlety of massing that might be mistaken for architectural modesty. This building, as we have seen, is anything but modest, and its imagery of floating pavilions whose roofs are supported by thrusting columns dominates utterly. Modern art is great art at Ando's Modern.

Conclusion

The Modern contributes much to the debate about modernity and contemporaneity in art. Yet the building raises as many questions as it answers with its inaugural installation of the Modern's impressive but spotty permanent collection. On the lower level, works by canonical artists of the mid-century are housed in spaces with no natural light—a strange choice, since paintings by Rothko, Motherwell, Guston and Pollock would benefit from daylight. The second-floor galleries are filled with experimental art—often photographic, hence light-sensitive—of the past decade or two. The placement of these works in galleries of such expense and refinement forces the viewer to accept them as great works rather than to recognize that they, like all recent works of art, must withstand at least a generation of criticism and exhibition before they are effectively canonized. Yet for me, the biggest disappointment of the Modern is not that the collection has weaknesses (no Johns or Rauschenberg, for example, and not a single work of modern art from before 1940), but that a building conceived with such brilliance was not realized with a respect equal to that brilliance. We know from comparison to the Kimbell that the installation at the opening can be completely transformed and improved through time. Yet we must remember that it was Louis Kahn who completely redesigned the Kimbell so that it could be built within budget. One suspects that it was less Ando who undercut the Modern than Peter Arendt, Linbeck Construction, and their bosses, the museum's generous donors and its senior staff. A sublime conception—one of the very greatest in the history of museum design—has become a great building that could have been sublime.