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ARCHITECTURAL DESIGN

Editor in charge: James A. Murphy

A Bow to Bahrain
The United Gulf Bank in Bahrain, by Skidmore, Owings & Merrill, responds to the culture and climate of the place in a freshly Modern way. Thomas Fisher

The Risk Factor
In an effort to demonstrate that bigness doesn’t preclude innovation, Vitra International, one of Europe’s largest producers of office seating, has commissioned works from internationally known architects, designers, and artists. Pilar Viladas

Natural Progressions
Designed by Luis Flores of Torres Marvel Flores, a gateway to a park in Puerto Rico establishes a strong sense of procession, yet strives to blend as much as possible with its natural surroundings. David Morton

UC Builds
After a long period of inactivity, the University of California system, with 140,000 students on nine campuses, will be the client for several billion dollars’ worth of new buildings over the next decade. Pilar Viladas, Susan Doublet

Through the Looking Glass
Although an apparently completed Paris landmark for over a year, the Arab World Institute—designed by Jean Nouvel, Gilbert Lezenes, Pierre Soria, and Architecture Studio—opened only this spring. Its interiors are shown here for the first time in the U.S. press. Marie Christine Loriers

SPECIAL SECTION

NEOCON® 20
This section lists seminars and workshops at NEOCON® 20 in Chicago, June 14–17, and previews some of the products being introduced.

111 NEOCON® 20

Cover
Detail of United Gulf Bank, Bahrain, by SOM (p. 65).

Photo: Nick Merrick, Hedrich Blessing.

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When the AIA convenes in New York this spring, the experience of the metropolis will be competing for attention with scheduled events.

This month, the AIA brings its annual convention to New York, for the first time since 1967. The institute was scheduled to convene in the Big Apple back in 1985, but construction delays on the new Convention Center caused hundreds of meetings to be postponed—in one of the mega-blunders that seem all too typical of New York. (Now, although badly located and short on amenities, the hall is open and looking so good that it is earning I.M. Pei & Partners another AIA Honor Award.)

To a greater extent than members of most organizations, AIA convention-goers find the experience of the host city a real professional benefit—and a major inducement to attend. Various of the oddly related components of the convention program draw certain members, of course: Voting for officers, resolutions, etc., draws the institute politicians; the recipients of various honors are more or less obligated to appear; the array of continuing education seminars attracts many members; and the special interest groups that meet before and during the main event have committed followings—the women, the students, the minority members, the fellows, the members of certain national committees. But notwithstanding all these official reasons to attend, I suspect that the majority of convention-goers choose to go largely on the basis of the meeting place and how the convention program promises to exploit the local attractions.

It is interesting that last year’s convention in Orlando was held in June, after schools were out, to encourage architects to bring their kids to Disney World; and there was apparently the largest number of kids ever to join the convention fun. It was hard to tell whether making the family welcome reinforced or undermined the official part of the program. In New York, the distractions will be of other kinds: People will play hooky to dine and shop and stroll through old neighborhoods and visit buildings they want to see. AIA convention planners, of course, try to harness these urges, incorporating major works of architecture into their plans. The Host Chapter Party will be in the Winter Garden of the not-quite-finished World Financial Center; the investiture of fellows will take place in the Cathedral of St. John the Divine; the McGraw-Hill party will showcase the IDCNY in Queens. There will be tours to a remarkable diversity of sites in the city and surrounding suburbs.

Every time the AIA meets in a major metropolis, its attractions are competing with the scheduled sessions, the seminars, the exhibits, and the official parties. In many ways, the ideal AIA convention city is a small, manageable one with enough architectural pleasures to satisfy the attendees during a short visit, but not so many distractions that they’re tempted to defect from scheduled events. San Antonio (1986) was ideal, with a number of choice examples of architecture and planning, along with plenty of good food and some outstanding hotels, all conveniently close together.

Among the attractions New York can offer that a smaller city could not is a wide variety of architectural exhibitions in some of its many museums and other showplaces (PA News Report, p. 31)—which will, of course, worsen the competition for every attending member’s hours. One of these shows, the Ten on Ten exhibition put on by the New York Chapter AIA at their home in the Urban Center (which is well worth a visit in itself) promises some guidance on what to see in the city. Ten local journalists (including me) were each asked to choose ten works of architecture that exemplify New York in the 1980s. Some of my choices would be easy to visit along the way (the renovated New York Public Library or the RCA Building illuminated by night) and some will be the sites of convention events (World Financial Center, IDCNY). The show as a whole should suggest many worthwhile sidetrips.

Inevitably, convention-goers will also see the troubling side of New York as well. Even those who choose not to visit a low-income neighborhood or ride a subway will observe litter and graffiti and the homeless huddled in doorways. By now, many of the visitors may be used to seeing such sad signs in their own cities as well, but that does not make them any less embarrassing.

Let’s hope, anyway, that when the AIA visitors leave for home they take away some constructive memories of this unique city. Let’s hope that they know what to attend and what to skip and where to go when they’re on their own in New York.
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Views

Preservation Easements
I read with interest in "Pencil Points" (March issue, p. 38) that Unity Temple in Oak Park, Illinois, "has become the first religious building in the United States to be protected under a preservation easement." While this is good news, it is inaccurate insofar as the Society for the Preservation of New England Antiquities (SPNEA) has long held interior and exterior preservation easements on Boston's Old West Church (built in 1806) and Charles Street Meeting House (built 1807).

The Stewardship Program of SPNEA currently administers preservation restrictions on 36 properties encompassing a variety of building types.

Brian Pfeiffer
Associate Director of Stewardship Society for the Preservation of New England Antiquities
Boston

Prestressed Concrete Successes
We took great interest in Raymond DiPasquale's discussion of the need for careful detailing of precast/prestressed concrete elements ("Failures: Prestressed Concrete," March issue, p. 67). The Prestressed Concrete Institute is enthusiastically supportive of any effort to increase the awareness of the proper design of precast/prestressed concrete structure. Nevertheless, we're concerned that the article's tone—to say nothing of its rather unfortunate headline—may have left the impression in some readers' minds that structural failures such as those described are commonplace, or that the proper design of precast/prestressed concrete structures is inordinately difficult.

We're proud of the fact that precast/prestressed concrete structural design has come a long way in the decades since many of the buildings Mr. DiPasquale describes were built. Today, thanks in part to research sponsored by PCI, the movements of prestressed concrete elements are well understood, and strategies for dealing effectively with these forces have been established for many years. Because these standards have been set, structural failure of precast/prestressed concrete members is extremely rare. Architects can specify precast/prestressed concrete without feeling that they are in any way compromising the safety or load-bearing capability of a structure.

While the proper detailing of precast/prestressed concrete elements has become a relatively routine matter, Mr. DiPasquale's article calls attention to a very important point: It is crucial that the architect or engineer consult with a precast manufacturer early in the design stage of a project. The precast manufacturer can serve as a valuable resource for information on the detailing of connections, bearing pads, etc., and can suggest ways that the designer can make the most of the inherent efficiencies of precast/prestressed concrete.

As Mr. DiPasquale points out, precast/prestressed concrete is a very viable building material which opens the door to entirely new structural and aesthetic achievements. We trust that the growing number of architects who are using the material are not discouraged by the negative implications of this article.

Thomas B. Battles, AIA
President, Prestressed Concrete Institute
Chicago

Photo Credits Omitted
The model photos that illustrated the article on Michael Graves's designs for the Disney Dolphin and Disney Swan Hotels (March P/A, pp. 37 and 39) should have been credited to William Taylor.

Urban Design Credits
The only aspect of the Battery Park City guidelines (March P/A, pp. 86–93) that Alexander Cooper and Stanton Eckstut worked on jointly was the project's master plan. Cooper was responsible for the project's commercial guidelines; and Eckstut, for the residential guidelines for the South Residential Area that includes Rector Place.

The authorship for the Hunter's Point development plan (March P/A, p. 82) was Beyer Blinder Belle and Grazen Samton Steinlass (not The Grazen Partnership).
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Design Freedom
The Camarilla office center was originally designed with a steel roof and tilt-up concrete walls, much like many other low-rise commercial structures in the Waco, Texas, area.

But Jess Williams, project architect for HOK, Inc., abandoned the standard approach because the developer was looking for generous window areas to increase interior visibility and attract potential tenants.

The answer is a roof system designed with parallel chord trusses and pre-framed wood wall components. All lumber is Southern Pine.

The dimensions of the 19,280 square-foot building are 241 x 80.

1. Design Freedom

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   The dimensions of the 19,280 square-foot building are 241 x 80.

2. Money

   Even if the wood systems hadn’t produced a better looking building, they might have won out anyway.

   The reason is clear: The cost of the wood building turned out to be
The cost of trusses and roof deck was $38,500 including materials and labor. The wall system was $39,100 for materials and labor.

Developer Gary Hancock of Camarilla Development Company said, "This is an excellent office building and we're planning to build several more."

Aesthetically, the building is doing what Hancock hoped it would. Waco is overbuilt in terms of office space; the wood system gives Camarilla Development a competitive edge for future leasing in a tough market.

**Time**

The structure was completed six weeks ahead of schedule.

Wall and roof framing were completed in only 17 days. The entire structure was completed in less than 16 weeks, rather than the scheduled 22 weeks.

Sound design and careful scheduling helped save time. So did the component fabricator, Trussway Dallas. Trussway supplied the roof trusses and pre-manufactured the wall components.

The finished roof is 3/4-inch plywood decking covered by insulated sheathing and Firestone's "rubber roof" surface.

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Three projects by Aldo Rossi are shown in progress, page 33. Shown above is Rossi’s arch design for Galveston, Texas, to be completed next month.

**Safdie Wins Toronto Opera**

Moshe Safdie has been awarded the commission to design a $230-million, 2000-seat Opera Ballet House in Toronto following a controversial selection process that was part design exercise, part popularity contest. Safdie’s competition down the stretch consisted of Barton Myers Archi-

**West Side Waterfront**

Nobody knows what’s going to happen to the four derelict miles of New York West Side waterfront, but the Municipal Art Society of New York wants people to think about it. The Society, with a grant from the National Endowment for the Arts, sponsored “wanted: A Waterfront for New York; A Competition for Ideas,” which invited anyone—from master planners to poets—to offer a scheme for a site along the Hudson River that includes 66 acres of land and 77 of piers. This huge chunk of public property running from Battery Park City to West 44th Street was assembled for Westway, the $3 billion freeway/park/real estate development brought down by the striped bass in June 1985. More than 400 entrants met

**Pagnamenta/Torriani West Side design, one of six winners.**

(continued on page 26)

**AIA Honors: Soup to Nuts**

As diverse a collection in style as in program, the 15 winners of the 1988 Honor Awards from the American Institute of Architects cut a cross section through a certain stratum of contemporary American architecture. From Gwathmey Siegel to SOM to Murphy/Jahn, the names are known and respected. Most if not all of the winners will be familiar to readers of American

**AIA New York: Shows in Town**

Architects attending the AIA Convention this month in Manhattan may want to spend an extra day or two museum-hopping. Never have so many shows on architecture and design run concurrently in New York. (See Calendar, p. 41, for full details on these and other exhibitions.)

Organized by historian Robert Jensen, whose book *Ornamentalism* put Postmodernism on the coffee tables of America, “Architectural Art: Affirming the Design Relationship” ties in directly to the convention theme of Art in Architecture. On view at the American Craft Museum in Midtown, the ambitious endeavor, which is cosponsored by the AIA with support from Haworth, includes lectures and tours of in situ art works.

(continued on page 24)
Pencil Points

Richard Meier has been awarded the 1988 Gold Medal of the Royal Institute of British Architects.

I.M. Pei has been awarded the Medal of the French Legion of Honor for his work on the Louvre Museum, which opens to the public this November.

Steven Holl of the Royal Institute of British Architects, New York, and Peter Pran of the New York office of Ellerbe Associates have been selected to design an addition to the Tate Museum, which opens to the public this November.

Peter Eisenman, New York, in association with Lorenz & Williams, Cincinnati, has been chosen to design a $20.8-million expansion of the Royal Academy of Arts in London. The expansion will include exhibition spaces, offices, and a restaurant.

Cambridge Seven Architects have been commissioned to design an addition to the Tate Museum in London. The addition will include exhibition spaces, offices, and a restaurant.

John Hejduk, dean of the School of Architecture at Cooper Union, New York, will receive the 1988 Topaz Medal for Excellence in Architecture and Landscape Architecture from the AIA and the Association of Collegiate Schools of Architecture.

The Jerde Partnership, Los Angeles, has been chosen by developers Rouse & Associates as master planners for Penn's Landing in Philadelphia. The mixed-use development on the Delaware River will include office, residential units, retail, and hotels.

Gottfried Böhm, Cologne; Frank Gehry, Los Angeles; Hans Hollein, Vienna; and James Stirling, London, are the four finalists selected for the Walt Disney Concert Hall in Los Angeles.

Jones & Kirkland, Toronto, architects of the Mississauga City Hall (P/A, Aug. 1987, pp. 69–79) have split up to form separate offices as Edward Jones Architects and Michael Kirkland Architect.

“Decon” Talks at the Tate

On the one side there was Jacques Derrida (or rather a video of the French philosopher who was absent due to illness) and his formidable elusive notion of “Deconstruction,” a term whose definition includes its own displacement. As Derrida himself said, “Each time Deconstruction speaks through a single voice, it’s wrong. It’s not deconstruction anymore.”

On the other side, there was Mark Wigley, ex-student of Derrida and curator with Philip Johnson of the forthcoming show “Deconstructivist Architecture,” at the Museum of Modern Art in New York which will feature Peter Eisenman, Bernard Tschumi, Daniel Liebeskind, Frank Gehry, Coop Himelblau, the Office of Metropolitan Architecture, and Zaha Hadid.

We were then, assembled at the Tate Gallery for a day-long symposium on “Deconstructivism” to recognize the work of these architects as the practice that ratifies the theory? The symposium voices conflicted. Eisenman declared roundly that “in fact, we do not do deconstructivism.” Tschumi also considered “deconstruction” an a priori characteristic of a world already exploded by information.

Philosopher Christopher Norris began by asking Derrida, “Can there be such a thing as deconstructivist art or architecture?” Derrida replied, “At first I thought, no, it was a displaced discourse. Later I concluded that the most efficient way of putting through a deconstructivist discourse was art and architecture. Deconstruction... means putting into question architecture itself. Once one has questioned the hegemony of ‘function,’ ‘dwelling,’ one must reinscribe them. Deconstruction isn’t just forgetting the past.”

In fact, as art historians Catherine Cooke and Robert Rosenblum pointed out, these architects could be said to be repeating the past in following a tradition of the disjunctive that extends from the Mannerists to the Modernists. As such—and regardless of whether or not this work indeed corresponds to Derrida’s definition of deconstruction—“Decon” looks likely to become an antidote to the “Zelig” syndrome of polite contextualism that afflicts much Post-Modern architecture.

Frank Gehry at the Building Museum

Architect Frank Gehry’s several sheet-metal installations in the Great Hall of the National Building Museum were completed, at last, early this spring. Not surprisingly, perhaps, given the ambitious and complicated nature of Gehry’s design, the construction took two months longer than anticipated. Consequently, the wonderful exhibit on the architectural uses of sheet metal housed within Gehry’s towering geometric structures opened in January amidst the din and debris of ongoing construction.

Sheet Metal Craftsmanship: Progress in Building” marks the 100th birthday of the Sheet Metal Workers International Association, who sponsored it in conjunction with the Sheet Metal and Air Conditioning Contractors’ National Association and the National Training Fund. Gehry’s structures are an homage to sheet metal, clearly inspired by the gargantuan proportions of the Pension Building. For the first time in anyone’s memory, one full end of the hall (nearly 15 stories tall) seems filled by the wacky, 65-foot-tall intersecting plywood shapes clad in tinne metal and copper.

The curvilinear forms of some reportedly gave initial pause to...
the volunteer sheet metal workers building them, many of whom were not accustomed to shaping compound curves and seams. But the workers grew enthusiastic as the installation took form, and the resulting craftsmanship is striking. The structures work exceptionally well as settings for this fine display of sheet-metal items ranging from utilitarian skylight frames to decorative ornate finials, which remains on view at the NBM at least until next September. Exhibit curator and assistant museum director David Chase reports that attempts are now being made to find a permanent home for them, but acknowledges that dismantling will be difficult at best. Besides, one wonders, where else could an indoor space of sufficient dimensions be found?

The typically vast and somewhat disappointing emptiness of the Great Hall prompts the further question: Why not just leave them there? They could work as well for other NBM shows, and as usable sculptures in the space, their attractiveness could prove to be enduring.

But, says Chase, "the space may have other commitments." He does not necessarily mean forthcoming museum shows (in any case, there's plenty of floor space left over for any exhibit that could conceivably be planned). Rather, he refers to the Pension Building's second life as the traditional site for presidential inaugurations, a function it has served since 1885. The next inaugural in 1989 is unlikely to prove an exception.

Whichever presidential candidate has reason to celebrate next January, he ought to be encouraged to adopt one or two of these formidable, interesting structures. Thomas Voner

Honor Awards (continued from page 21)

architectural magazines; seven of the 15 have been featured in P/A.


In addition to chairman's Turnbull, the 1988 Honor Awards jury members were W.G. Clark of Clark & Manefee Architects, Charleston; Mildred Friedman, design curator of Walker Art Center, Minneapolis; Paul A. Kenna, Jr., of Caudill Rowlett Scott/Sirrine, Houston; William Morgan of William Morgan Architects, Jacksonville; Laurie Olin of Olin/Hanna/Olin, Philadelphia; landscape architects; John T. Regan, Dean of the School of Architecture at the University of Miami, Miami; John Vinci of the Office of John Vinci, Chicago; and Melanie White, architecture student at Mississippi State University.

The Honor Awards will be presented at the AIA Convention this month in New York.

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The typically vast and somewhat disappointing emptiness of the Great Hall prompts the further question: Why not just leave them there? They could work as well for other NBM shows, and as usable sculptures in the space, their attractiveness could prove to be enduring.

But, says Chase, "the space may have other commitments." He does not necessarily mean forthcoming museum shows (in any case, there's plenty of floor space left over for any exhibit that could conceivably be planned). Rather, he refers to the Pension Building's second life as the traditional site for presidential inaugurations, a function it has served since 1885. The next inaugural in 1989 is unlikely to prove an exception.

Whichever presidential candidate has reason to celebrate next January, he ought to be encouraged to adopt one or two of these formidable, interesting structures. Thomas Voner

Honor Awards (continued from page 21)

architectural magazines; seven of the 15 have been featured in P/A.


In addition to chairman's Turnbull, the 1988 Honor Awards jury members were W.G. Clark of Clark & Manefee Architects, Charleston; Mildred Friedman, design curator of Walker Art Center, Minneapolis; Paul A. Kenna, Jr., of Caudill Rowlett Scott/Sirrine, Houston; William Morgan of William Morgan Architects, Jacksonville; Laurie Olin of Olin/Hanna/Olin, Philadelphia; landscape architects; John T. Regan, Dean of the School of Architecture at the University of Miami, Miami; John Vinci of the Office of John Vinci, Chicago; and Melanie White, architecture student at Mississippi State University.

The Honor Awards will be presented at the AIA Convention this month in New York.

West Week '88: Fun in the Sun

For the nearly 35,000 people who packed the Pacific Design Center in Los Angeles last month, West Week offered not only new furnishings and showroom design, but also an impressive program of events.

The biggest new showroom was AllSteel's, a 15,000-sq-ft space designed by Orlando Diaz-Azcuy and Gensler Associates. Its stainless steel wall panels looked sleek, corporate, and expensive. Michael Tolleson's remodeling of the Stendi showroom into two spaces (one for sister company Charvoz Seating) featured a wall of bold, projecting forms and rugged, inexpensive materials. Another winner in the not-quite-complete green PDC expansion, the best temporary showroom was Vecta's, where Michael Rotondi of Morphosis encased chairs in a series of boxes made of fibreglass panels, with vinyl cushions.

The seminars and lectures drew standing-room-only

crowds, as usual. Astronaut Joseph Allen and designer Michael Kalil talked about outer space, while architect Gae Aulenti discussed her earthbound (and controversial) Musée d'Orient at the Architecture in Context series. Richard Rogers showed, among many other projects, Lloyd's of London, and the PDC's own Cesar Pelli engaged in a friendly but spirited one-on-one with Frank Gehry. The last day of the conference began with Benoit Mandelbrot's talk on his discovery of fractals, a form of geometry that constitutes a major breakthrough in the field. The day ended with the customary party, which this year was more appropriately termed a happening. In addition to a dazzling fireworks display, artist June Wayne was launched into the air with helium balloons to videotape the crowds below; the picture was then to be projected onto a giant screen in the PDC's plaza. It didn't work quite that way, but no one seemed to mind a bit. Pilar Viladas
Safdie (continued from page 21)

tects, in association with Kuwabara Payne McKenna Blumberg and James Stirling, Michael Wilford & Associates with the Lyric Theatre Venture, a consortium of local architects.

The Ballet Opera House Corporation, made up of members of the boards of the National Ballet of Canada and the Canadian Opera Company, went about choosing an architect without having secured either a site for the proposed facility or the necessary funds for construction. The government of Ontario had offered a downtown site in 1984, and it was this chunk of land that was addressed in the competition. But the city of Toronto wants the site for housing, and the new government of the province, while it funded the search for an architect, is unlikely to surrender the valuable real estate to the Ballet Opera Corporation.

The Corporation also failed at first to name a single architect to the selection committee. Thanks to adverse criticism, architects Essy Baniasad, Jeremy Dixon, Mac DuBois, and Phyllis Lambert were eventually invited aboard. They joined eight representatives of the ballet and opera companies. Only 49 firms—as compared with 246 in the Missisauga City Hall competition—applied for the job; of these, 15 were joint ventures with architects outside Canada.

Finalists were required to spend three weeks in consultation with the companies for purposes of developing “design synergy”: they were given two more weeks to come up with a scheme in the form of a sketchbook and block model.

Although Stirling was considered the man to beat by both Safdie and Myers, Safdie carried the day with striking models and bombomie: “What I had going for me was the relationship that evolved with the members of the companies,” he said. All three architects exceeded the design requirements and a fee of $25,000 by far.

Safdie’s models show a marked resemblance to his National Gallery in Ottawa, which is now nearing completion. If the opera ballet site changes, however, he’s prepared to “put all my drawings in a drawer and start afresh.” The commission is for him a double first: his first building for the performing arts and his first building in Toronto, where he is opening a permanent office.

“I see a shift of my professional activities into Canada from the U.S.,” said Safdie, alluding to the cancellation of his Coliseum Center in New York, a project now in the hands of David Childs at SOM (P/A, Feb. 1987, p. 23). In Canada, however, Safdie apparently can’t lose. Adele Freedman

The author is architecture critic for The Globe and Mail in Toronto.

The Pizza Pantheon (and F.L. Wright)

Does too much pizza warp the mind? Those who attended the Frank Lloyd Wright symposium held March 25–27 at the Domino’s Pizza headquarters in Ann Arbor, Michigan, had the chance to judge for themselves. Jointly sponsored by Domino’s and the University of Michigan College of Architecture and Urban Planning, the conference was entitled “Preserving Wright’s Heritage,” a theme inspired by Thomas S. Monaghan, owner of Domino’s Pizza and the world’s largest collection of Wright artifacts (P/A, Nov. 1987, pp. 118–123).

Other weekend events included the opening of the Frank Lloyd Wright Museum and new offices of the National Center for the Study of Frank Lloyd Wright, housed for the present in an office building on the Domino’s campus, and the presentation of a matching grant of $25,000 to the University of Southern California for emergency restoration of Wright’s Samuel Freeman house in Los Angeles. Yet these serious purposes were undermined by the efforts of more than one speaker to justly point out the personal and frequently quirky enterprises of the symposium’s wealthy sponsor, Monaghan.

In his remarks at the first plenary session, Monaghan rejected criticism leveled at him and his many projects in the local and national press. But he evoked particular annoyance at the Ann Arbor township planning commission for refusing to waive restrictions barring hotel usage in the recently unveiled “leaning tower of pizza,” designed for the corporate headquarters by Gunnar Birkerts. “To think architecture have been lost in this country because of planning commissions,” he inveighed, praising Houston as an ideal environment for development.

In a spirited impromptu response, keynote speaker Brendan Gill, architect critic for the New Yorker, rebutted Monaghan’s remarks. The 70 million square feet of vacant office space in Houston, he offered, bears its own testimony to unrestricted development. In concluding remarks, Gill commented on the irony of the symposium theme itself. “Throughout his career, Wright always mocked the past,” he reminded the audience, suggesting that Wright’s competitive urge to be the newest of the new “led to a lack of respect for preservation.” Nevertheless, (continued on page 26)
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West Side (continued from page 21)

the competition's December 1987 deadline, and the jury, headed by architect Henry N. Cobb, chose 26 finalists, whose ideas ranged from "don't build" polonies and campgrounds to vast projects and glass cliffs and steel towers, presented in lead, ink, and videotape.

By sparking a vivid debate on waterfront design, the competition's deliberations were an objective. A well-attended exhibition of winning entries held early this year was only the beginning. One hundred to 200 entries will be shown at New York's Fashion Institute of Technology this summer (June 22-July 30). There will be concurrent symposiums on the waterfront, organized by a committee including Albert Butzel, the leading attorney for the National Resource Defense Council in their fight against Westway; David Childs, a design partner at Skidmore, Owings & Merrill, New York; and Ross Sandler, New York's Commissioner of Transportation.

In addition, a half-hour video is planned, and there are tentative exhibition plans for Europe. Virginia Dajan of the Municipal Art Society, who ran the competition, notes that not only the quantity, but also the quality of public discussion has improved from a year ago, when it seemed that "there were only two camps — developers who wanted to build 200 buildings 70 stories high, and people who wanted only parks with esplanade."

But all can this talk be turned to action? The strategy of holding a competition to provoke public interest has worked for the Society before. The MAS-sponsored 1984 Times Tower Site Competition (P/A, Oct. 1984, p. 23) had at least an indirect influence on subsequent architectural guidelines proposed for the district's redevelopment by the Urban Development Corporation and may have been a key influence in saving the Times Tower itself from demolition.

This time around, the Society may well realize a second objective: seeing to it that the site is developed according to a master plan. The potential masters of this plan — including representatives of New York's Community Boards, the City Planning Commission, the UDC, and the Governor's office — reviewed the entries at length. Gary Hack, an urban designer with Carr/Lynch Associates, Cambridge, Mass., and professional advisor for the competition, believes that the mayor and governor are "inching their way to a public entity" that would take responsibility for a master plan. For now, however, the only plan is the January 1987 report of an ad hoc body — the West Side Task Force, which called for a six-lane water-front boulevard.

Raymond W. Gastil

The author is an architect with Robert A.M. Stern Architects, New York.

Reynier Banham: 1922-1988

British critic Peter Reyner Banham died on March 19 at the age of 66. Banham moved to the States in 1976, teaching at the State University of New York at Buffalo and the University of California at Santa Cruz. His first book, Theory and Design in the First Machine Age (1960), became an influential work of architectural theory, while The Architecture of the Well-Tempered Environment (1969) was one of the first histories to emphasize technology. His 1971 book Los Angeles: The Architecture of the Four Ecologies also broke new ground, mixing architectural, social, and cultural history.

Museum Design Discussed in Houston

Pontus Hulten, director of the Palazzo Grassi museum in Venice and the first director of both the Centre Pompidou and the Museum of Contemporary Art, Los Angeles, set an appropriately relaxed and rambling tone in his keynote speech for "The Museum: Art and Architecture." The symposium was sponsored in late March by the Rice Design Alliance and the Museum of Fine Arts, Houston, and held in the museum's audiovisual center, which is part of the 1974 addition designed by Ludwig Mies van der Rohe.

Hulten reminded the audience of 370 design professionals and museum personnel from the U.S. and Canada that museums are "continually charged with trying to attract a public — departments, which are at the same time civic symbols, laboratories of participatory democracy, and "very erotic places." They present, Hulten said, "the most difficult problem that an architect can get dragged into." At best, Hulten concluded, "they are like a collective work of art, which is a contradiction."

But difficulties were hardly the focus of the leisurely tour of new museums worldwide presented the next day by a stellar lineup of international architects and critics.

Hans Hollein, the Viennese Prizker Laureate, presented built and in-construction designs and a number of projects, ranging from a small experimental museum in Belgium fixed on a vertical turntable, to the Museum of Modern Art nearing completion in Frankfurt.

Arata Isozaki's presentation centered on his design with James Stewart Polshek & Partners of the planned $220-million expansion of the Brooklyn Museum. Architects McKim, Mead & White employed a composite of the five classical orders for their 1893 façades, said Isozaki, who plans to go one better by creating a skin for the addition. Isozaki's design vitri-lizes the "orders" of 20th-Century architecture, which he defined as "frame, grid," and "complete flushness of skin."

Next up was Charles Moore, FALA, who presented recently completed buildings that unite the "orders" of 20th-Century architecture, which he defined as "frame, grid," and "complete flushness of skin."
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Museums (continued from page 26)

attention to the dreams and images of the users of the buildings and translates them into images that mean something to the people for which the building is built.

Those who left the morning session wondering why some of the other architects with well-known, recent museum commissions had not come—Richard Meier, Venturi, Rauch & Scott Brown, and James Stirling, for example—got the answer in the afternoon.

John Walsh, director of the J. Paul Getty Museum in Los Angeles, presented models and drawings of his institution by Richard Meier. Scholar Joseph Rykwert, who said that even the best-designed museum, "involves an element of trudge," took a detour to ancient Alexandria for a discussion of the first museum—"a propaganda machine, there solely to glorify the dynasty." Today, Rykwert said, "the museum is no longer a place of instruction, but a place of cult—quasi, if not wholly, religious in nature."

Critic Stanislaus von Moos, author of a recent monograph on the work of Venturi, Rauch & Scott Brown, ended the presentations with a critique of James Stirling’s Siz Museum in Munich (1985), comparing the strategies employed to those used by Venturi in the Allen Museum addition at Oberlin College (1973) and the Franklin Court in Philadelphia (1972). Along the way, Moos reported the illuminating fact that in West Germany, museums now draw more patrons than do sports stadiums.

This explosion of interest, mirrored in the United States, explains why the boom in museum construction continues. Indeed, Houston MFA director Peter Marzio said that his institution is contemplating an expansion program that would more than triple the museum’s current size. "That’s one of the reasons we wanted to have this symposium," Marzio said.

A sad note was sounded by many of the speakers, mourning the death of architecture critic Peter Reyner Banham, who was to have taken part in the symposium but died the week before. "Peter would have contradicted what I’m going to say," Joseph Rykwert said in a brief tribute at the beginning of his talk. "I am sorry that he isn’t here to do so."

Joel Warren Barna
The author is the editor of Texas Architect.

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With seven buildings completed in Europe in the past two years, and ten more on the way in the U.S. and abroad, Aldo Rossi no longer has to contend with the criticism that most of his architecture is on paper. Demand for the Italian architect's work has grown to the extent that Rossi has opened a small satellite office in New York, where two of the projects published here—one in Japan, the other in Miami—were developed. The stateside office also has completed the design of a temporary amphitheater planned for construction this summer in Toronto. And even though it's Rossi's work-on-paper that will be exhibited for sale this month and next at Los Angeles's Kirsten Kiser Gallery, the prospect of his building in North America means a ready chance to see firsthand the work of an architect whose influence, for many, has been limited to writings, drawings, and photographs.

Hotel and Restaurant Complex, Fukuoka, Japan. Architects: Aldo Rossi, Milan; Den Seki, Tokyo. Groundbreaking took place in April for this 65,000-square-foot building, designed as the focal point of waterfront redevelopment. The project seeks to upgrade the image of a neighborhood notorious for its nightlife. The eight-story hotel rests on a single-story base, which will house a discotheque, bar, and several restaurants. One enters the hotel by ascending a monumental stair and crossing a stone piazza. Red stone, engaged columns, and green steel lintels dominate the imposing façade, which echoes the form and rhythm of a conventional building front despite its absence of windows. The hotel's side walls will be constructed of brick and articulated only by the rhythm of room windows. Simple floor plans provide a broad canvas for the embellishment of Japanese interior designers who, according to Rossi, will give personality to the individual spaces. Completion is expected in spring 1989.

(continued on page 34)
In Progress (continued from page 33)
School of Architecture, University of Miami, Miami, Fla. Architects: Aldo Rossi and Studio di Architettura, New York. This major expansion addresses what Rossi defines as the campus’s main fault: the absence of a center or prominent landmark. The new buildings, dominated by a rotunda and vaulted auditorium, form a tiny city atop a sweeping base. This base—an “acropolis,” in Rossi’s words—rises above the campus’s flat site. Placing university facilities, rather than parking, beneath the acropolis brings the amount of new space to about 90,000 square feet. Five small buildings will house a library, administrative offices, and support facilities. In the current scheme, still in design development, a palm-lined walk links the complex with a tower (planned as meeting/jury rooms) that sits on the edge of an existing lake. Recent changes to the project include a new conical space at the top of the rectangular tower (see inset, above). Classrooms will occupy four existing buildings along the walkway.

(continued on page 36)
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In Progress (continued from page 34)

Carlo Felice Theater, Genoa, Italy. Architects: Aldo Rossi, Milan; Ignazia Gardella, Genoa; A. Sibilla, Genoa; and Fabio Reinhard, Lugano. Winner of a 1982 competition, this scheme was controversial for its proposal to recreate—on the exterior, at least—the original design of Barabino’s theater, virtually destroyed during World War II. Rossi defended his choice to reconstruct the old façade, rather than create a new one, as necessary to record a critical period in Genoa’s history: its emergence as a middle-class city. The project encompasses the rebuilding of the Neoclassical exterior, creation of a new 2000-seat theater inside, and enlargement of the stage tower. A conical opening cuts through the building to bring light down to an entrance court, a public space that is recessed into the building. A large, towerlike mass houses the fly-loft and backstage areas. Construction began last October; completion is projected for 1990.

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For full details, call (609) 883-3300. Or write The Homasote Company directly.

<table>
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<tr>
<th>Panels sizes, nominal 4' x 8', 10' and 12' with T &amp; G Long Edges</th>
<th>Nominal Thickness</th>
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<td>R-FACTOR AGED</td>
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<td>Include air film and asphalt shingles.</td>
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| 19.2                                                        | 25.48            |
| 20.43                                                       | 26.71            |
| 2.5                                                        | 3.5              |
| 4.2                                                        | 4.4              |

*Includes air film and asphalt shingles.
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Why risk performance with a product that claims to be “the smart choice over quarry” when you can have the real thing...Summitville quarry tile, a proven performer that passes the tests of time and heavy traffic.

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Summitville
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The DPIC education program has caused us to do continuing education, at the most basic contract level, that we probably wouldn't have gotten around to doing as a whole group. There may have been a person here or there that would have been enthusiastic about it, but their premium credit program requires all partners and technical staff to participate and take the exams. So, without the program, I think it would have been unlikely we would have gotten 100% participation. But because it is required, we do get it. In fact, we are considering making the DPIC tests, including reading the book, a requirement for all staff.

I can't imagine anybody not participating in the educational program, because of the cost savings aspect of it. I mean, let alone the fact that it can help your practice.

I think we've saved on the order of $30,000 over two or three years. We've found DPIC's premiums, with and without the education program, to be generally competitive, so we do regard it as a savings.

You might find another carrier that could provide the same insurance for that net amount. But I think DPIC has been conscientious, in not saying, 'OK, we'll lower our price and forget about the educational program,' and I think that speaks well for them.
Products: The Architect Consumer

When it comes to building products, many architects have only a vague awareness of the effort required to produce, market, and distribute the bricks, carpet, windows, and thousands of other products they consume. Architects shop in a supermarket of product advertisements and sales representatives, specify from a menu of manufacturer catalogs, and have a feast spread before them at their construction sites—but they seldom enter the kitchen. A better understanding of the organization, activities, and concerns of the building product industry would enable architects to design with and specify building materials more astutely and effectively, and would strengthen their ability to lead the design and construction process.

Architects frequently identify three principal members of the design and construction team—owners, architects, and contractors—but overlook the building product industry. While building product manufacturers may not be prime contractors on typical architectural projects, they still play a vital role in the building process and have a significant relationship with all three principals of the owner/architect/contractor triad.

Producers have a direct and contractual relationship with contractors, selling them materials and products and providing them with training, credit, and other types of support. Producers can also have contractual relationships with building owners, especially on projects involving maintenance or rebuilding. But even in architecturally specified work, producers may still have direct relationships with owners. Many developers now list preferred building material vendors as part of their corporate building standards or procurement programs, often the result of manufacturers having established relationships with owners. And since many of (continued on page 54)

Specifications: Show Business

The 32nd annual convention and exhibit of the Construction Specifications Institute (Washington, D.C. Convention Center, June 24–26) will be the largest nonresidential construction products show in the U.S., with over 8000 visitors expected. The planned events include technical seminars, product marketing sessions, and business meetings for CSI members.

Why should an architect or specifier who is not involved in CSI pay the $135 advance registration fee ($270 at the door) and spend up to four hours on each of the three exhibition days inspecting the 930 or more product displays? There are many reasons.

For one thing, it is a good place to see new products and to find (continued on page 54)

Law: Arbitration and Mediation

Statistics published by the American Institute of Architects show that as many as 44 percent of insured architects might report a claim against them in any one year. This situation reflects a severe problem in architectural practice, but one that is faced by many other individuals and professions in a society that has become increasingly litigious over the past two decades. One of the effects of this proliferation of legal action is a heavy burden on the court system, where delays in the resolution of disputes can extend into years. This presents a problem for anyone who would like to reach a settlement quickly to avoid prolonged anxiety in the face of a lawsuit, and can be particularly acute in construction-related cases where disputes during construction can lead to massive expense and delays in completion.

For this reason, the process of arbitration offers a useful alternative to the court system. It can provide a fast, inexpensive reso- (continued on page 56)

Practice Points

Mergers and takeovers in the building products industry are making news on the nation’s business pages: Kelso & Co. recently won a bidding war with Black & Decker for American Standard; Paris-based Saint-Gobain is seeking to buy the 43 percent of CertainTeed it doesn’t already own; Koppers is fighting a hostile takeover attempt by British investor Brian Beazer; and Texas-based Desert Partners is attempting a hostile takeover of USG.

Housing starts rose 8.9 percent in February, according to the Commerce Department, calming fears that the October stock market collapse had done in the housing market. The gain, the largest in over a year, followed declines of 15.8 percent in December and 1.9 percent in January.

A “three-tier network” of A/E firms is emerging, says the LePatner Report. The trend of large, multi-office firms; (b) highly specialized “niche” firms; and (c) small, local, general practice firms.

Growing foreign competition in building materials is a trend to watch, reports the National Institute of Building Sciences. Its study indicates that imports of construction materials rose 11 percent last year, while exports rose only 5 percent.

Office workers have an average of 300 square feet in personal work space, 50 square feet more than five years ago, says the Building Owners and Managers Association (BOMA). Even at that rate, it will take a while to fill the 1.5 billion square feet of North American office space that BOMA says is now vacant.

Products: Michael Chusid looks at the building products industry.

Specifications: Walter Rosenfeld discusses the value of products shows.

Law: Robert Greenstreet evaluates arbitration and mediation procedures.
Products (continued from page 53)
the building product manufacturers' warranty obligations pass
directly to the building owners, producers can also have
relationships with owners that survive the final punch lists.

Architects and Products
The relationship of the building product industry to the archi-
tectural profession is more complex. Just as a painter can
be known for the palette of colors with which he creates his art, so
too is an architect dependent on the palette of building materials
available to him. The range of materials available today is larger
than it has ever been. This is primarily the result of manufacturers,
driven by competition, having to continually create and
exploit new technology, respond to and stimulate market de-
mand, and develop and promote new products and markets.

While the process and product was limited to locally available
materials, today the palette of building materials comes from manu-
facturers around the world. Instead of building with raw or
semi-finished materials, we assemble building components that are shop fabricated and finished. Master builders
with a personal knowledge of all building materials and methods
are an endangered species; designers and builders must now rely
on manufacturers' product data sheets, shop drawings, installation instructions, field training, and supervision, and on-site fabrication. Many building products require such specialized experience or knowledge that they can only be detailed or installed by the manufacturer.

The building product industry today is more than just a material supplier; it plays an integral role in detailing, engineering, and constructing systems, sub-assemblies, and entire buildings. After developing new technology and products, the building product industry must then introduce it to the rest of the construction industry. Through advertising, promotion, sales, and service, manufacturers must inform and educate designers and builders and provide technical assistance and support to users. The front line in that effort is the legion of building product salesmen and manufacturer's representatives, who act as consultants to architects.

The building product industry also influences architectural style and taste through advertising and marketing. Which came first, for example: the current design trend towards stone-veneer curtain walls or the development of new types of curtain wall systems and the technology to cut thin stone?

In a profession that turns out more graduates each year than can be routinely absorbed, architecturally trained students are finding that the building product industry is a major source of satisfying career opportunities. Positions in building product sales, product development, contract administration, and management await talented individuals who can speak the language of architecture.

There is not a standard way by which we can accurately measure the output of the building product industry. But it is clear that more than construction jobs are at stake when economic indicators point to an increase or decrease in construction. From the forests and mines where raw materials are extracted, and the refineries and mills where basic materials are produced, to the factories and shops where products and systems are fabricated, the building product industry is responsible for a significant part of the gross national product.

By becoming more familiar with the building product industry, architects can become better informed consumers and more effective practitioners, able to call upon and utilize the resources of the building product industry. Michael T. Chassìd

The author is an architectural specifications consultant and a technical and marketing consultant to building product manufacturers.

Specifications (continued from p. 53)
new sources of materials for use in buildings. A major show is always an excellent occasion for producers to introduce new items because the opportunity for event-related publicity as well as large, immediate exposure are both there. While new products do not always survive and prosper in today's tough marketplace, this is a chance to examine them early-on and ask the necessary questions.

Also, the real product is on display, not just a photo or a drawing to look at, giving architects a chance to feel, see, and touch it right there. Except for the architect working in a larger office located in a metropolitan area, manufacturers' sales representatives (if there are any in the region) probably do not visit very often or bring products with them. If it's only data that is wanted, there is also plenty of that available at the booths for examination. To get on the manufacturer's mailing list, one has only to present the plastic credit-card-type identification badge issued to each participant.

Furthermore, it is a lot easier to compare products of different manufacturers when they are only a few (hundred) yards away at nearby booths. That is hard to do back at the office without a lot of arrangement and manufacturer cooperation. And, since not all products are marketed everywhere in the U.S., this is one of the few occasions when it is possible to get some ideas about what is being done elsewhere in the country—not so easy to find out staying home. For sole practitioners and others from smaller offices, perhaps the most valuable part is the opportunity to talk to manufacturers' representatives one-on-one. That is a two-way street, because the manufacturer, while answering informed questions from the specifier about the product, gets valuable feedback on how the products work, what features are attractive, and what problems result from their use. Both parties benefit from that sort of exchange.

Clearly the CSI national show is not the only one in the world. The AIA, and many CSI chapters have similar, though smaller, product shows well worth attending for the same reasons.

The recent success of the professionally managed Boston Society of Architects' regional show and seminars (300 exhibits, 5000 attending), which drew from the entire Northeast, is a case in point.

International Shows
More Americans may now be attending international product shows, whether or not they have work overseas. Construction products, like so many other aspects of life nowadays, are increasingly becoming internationalized, with products being designed or fabricated in more than one country. Styles and materials travel easily these days across national boundaries and around the globe.

Among the best-known and most successful international shows is the annual French "Interbuild" (contact Building Trades Exhibitions Ltd., 11 Manchester Square, London W1M 5AB) and the French "Batimat" (contact Promosalons, International Trade Exhibitions in France, Inc., 8 West 40th Street, Suite 1505, New York, NY 10018). Both most recently took place last fall and will next appear in 1989 in Birmingham, England, and in Paris. Both are very large and cater to an international clientele from a solid domestic base in their own countries. The two shows are usually about ten days apart so that exhibits can appear at both.

Interbuild 1987 filled five large, interconnected buildings with some 1400 booths and had an attendance of over 143,000. Among the many interesting events at Interbuild are the trades competitions in which teams of apprentices vie for honors in building roofs or masonry walls at the show from drawings designed to test their skills. Unfortunately, though not to the world outside, the sight of real workmanship at a show is a welcome refreshment after a long day looking at computers, data sheets, and disembodied products. The big advantage to Birmingham (in addition to its proximity to London by train) is the lack of a language barrier. The show presents many familiar products as well as some that have yet to be tried on this side of the Atlantic.

Another event takes place at the mammoth exposition center near Paris' Porte de Versailles. Seven large buildings (the largest having three complete exhibition halls)
A glass smooth exterior.
On the outside, new Crystaline from Kawneer presents uninterrupted aesthetic appeal. Four-sided silicone glazing in the door and framing system puts all the glass on the same line for the look of a continuous reflective expanse. Readily available in stock lengths with the design flexibility of ¼" and ½" glazing or the thermal performance of 1" insulating glass. For storefronts, one-story office buildings and even interiors, Crystaline is the total system no matter how you look at it.

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See us at the CSI. Booths 1818 & 1820.
Specifications (continued from p. 54) floors), over 3500 exhibits, and half a million visitors from all over the world, must make this the biggest show of its kind anywhere. The products, like those in England, come from a variety of common market countries and beyond, with African and beyond, with Africa and of common market countries are coded to indicate the language spoken, but it's clearly an specific ations for a while. There are extensive areas devoted to introduced in Paris later turn up in the U.S. French names such as Porcher or Villeroy and Boch are just now becoming familiar here while others, like Rhone-Poulenc, have been in American specifications for a while. There are extensive areas devoted to ceramics tile, some European countries, and whole floors of plumbing fixtures and fittings, as well as other building materials. An eighth building houses a semi-independent show, "Inticherma" devoted to heating, ventilating, and air conditioning equipment. This is considered to wear out the most intrepid prod­uct show junkie from any part of the construction industry.

These regional, national, and international exhibitions do not really replace professional and trade publications, catalogs, or even local product shows; rather, they complement and supplement such information sources at a different scale. Even after electronic product data bases are fully developed and available, the need for printed versions can be large. The use of product shows will probably remain, not only for the reasons mentioned above, but also because of the social need for professional relationships, and for human communication about careers, personal interests, and new products. It's all a part of selecting and specifying construction materials in this last part of the twentieth century.

Walter Rosenfeld

The author is a consultant in construction specifications and project management in Newton, MA. He is currently president of the Boston chapter of CSI.

Law (continued from page 53) lution to disputes, since hearings presided over by an arbitrator with specific expertise in the area in question can be held pri­vately and informally at a conven­ient location. Limited appeal against the arbitrator's decision can also prevent a long, drawn­out dispute. Arbitration has be­come well established in the construc­tion field, and is written into many standard forms of contract (for example, the AIA documents A201, A401, B141) as an alternative, or at least a prelude, to litigation. Hearings can theoretically be established quickly and the contract may even provide for continuation of the project while the dispute is settled (AIA Document A201–1987, Article 4.5), thus minimizing delays in completion.

However, the system has some problems. Despite the potentially informal nature of the process, parties can still utilize the serv­ices of attorneys. A number of lawyers have even become arbitra­tors, so that under their influence, a hearing may be carried out very much along the lines of a normal court case, utilizing standard court procedures and adhering strictly to the rules of evidence. Timing may also be a problem. If each party decides to bring attorneys and expert witnesses into the arbitration, finding convenient dates may be difficult, particularly if the hear­ing extends over a number of days. An arbitration recently completed by this author took over three years to complete, primarily because of the prob­lems of establishing satisfactory times for all parties to meet and of unforeseen cancellations caused by other engagements.

If an arbitration involves a number of players, its cost will also be affected. With fees likely to start at $75 per hour, lawyers and expert witnesses can be costly, and the fees of the arbitra­tion panel must be added. Arbit­rators only serve the first day of hearing without charge, and thereafter are paid at a rate estab­lished by the American Arbitra­tion Association. The parties also must bear the costs of a stenographic record if desired, and the rental of the hearing room, both costs that do not usually occur in litigation. In the arbitration case previously men­tioned, the final costs accrued to over $500,000 on a $750,000 initial dispute.

Although arbitration may pre­cede the courts as a means of resolution, the lack of an appeal mechanism may mean that the losing party will take the case to court anyway, thus prolonging the dispute even further. This may happen with particularly litigious parties, or if one side feels that the arbitrator did not properly assess the case. Some critics of the process feel that arbitrators who are not legally trained may not have the ability to adequately resolve highly complex disputes. Because an arbitrator's award may be set aside by the courts for refusing to hear evidence, cautious ar­bitrators often hear anything that the parties wish to present for fear of opening themselves to such charges, thus extending the time in considering cases.

These problems, which mostly occur on large, complex cases, do not invalidate arbitration as a means of resolving disputes in the construction industry. Many arbitrations are carried out ex­peditionally and efficiently. Standard schemes such as the Home Owner Warranty pro­gram implemented by the Amer­i­can Arbitration Association, are excellent vehicles for speedy completion of disputes. Hear­ings usually take place in the home of the claimant and take several hours at the most to com­plete. Awards are then made within 20 days from the close of the proceedings. On balance, the use of arbitration in many construction-related areas is ad­visable and can provide a satisfac­tory alternative to the courtroom. Architects are usually well ad­vised to seek an arbitration clause in their contracts and to recommend such arrangements in the signed agreements be­tween their clients and contrac­tors. Since standard forms of contract usually incorporate an arbitration agreement, clients should be dissuaded from strik­ing these clauses prior to signing.

Although arbitration is an alter­native to going to court, the process is fundamentally the same. In both systems, opposing parties place their case before an independent third party who assesses the facts and issues a decision. The parties effectively bind themselves to that decision, which in most cases leads to a winner and a loser. The finite nature of such decisions can leave at least one side aggrieved and ruin the relationship be­tween parties still involved in the construction of a project.

The Mediation Alternative

An alternative to both arbitra­tion and litigation, which seeks to resolve a problem without necessarily declaring a winner, is the mediation process. Here, two parties voluntarily sit down with an independent mediator who discusses the dispute and tries to find a solution that is acceptable to both sides. The mediator's solution is non-bind­ing, and either side might decide at the completion of the meeting to resolve the dispute through the more conventional channels of litigation or arbitration.

Despite the wholly voluntary basis of the process, the American Arbitration Association, which has initiated a mediation program, reports considerable success. They report that 42 percent of their recent cases resulted in a settlement and were completed within 120 days. They also estimate that there was an approximate saving of $2,000 in legal expenses in each case. Similarly D.P.I.C., a major American insurer, claims that 80 percent of their group of 350 claims filed went to mediation, of which 90 percent were success­fully settled. By enabling parties to determine their own settlement, mediation increases the chances of contractual rela­tionships being maintained and of amicable solutions being reached.

Fairly recently, the American Institute of Architects has furthered its efforts to control lia­bility by working with the American Consulting Engineers Council, the American Society of Civil Engineers, and the National Referee Group to develop a mediation procedure in the construction in­dustry. The program, called the Construction Mediation Service, is a pilot project that is being administered by the Center for Dispute Settlement. It is being offered in the Washington metropolitan area, and, if successful, should provide the impetus for a nationwide mediation program in the construction field, bringing inex­hensive relief to an architectural profession beleaguered with li­gitation. If the two systems are anything to go by, mediation could have a greater potential for success than the broader-rang­ing, more ambitious, but ultimately less achievable goals of tort reform and limitation of liability, because it resolves prob­lems before they enter the formal dispute stage.

Robert Greenstreet

The author is an Associate Professor at the School of Architecture & Urban Planning at the University of Wisconsin-Milwaukee and Chair of the Department of Architecture.
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Inside, new Crystaline from Kawneer presents the rounded profile of radiused horizontal and vertical framing members only 2” wide and 4” deep. Snap-on head/sill members facilitate installation of interior trim, carpet, and ceilings. A full palette of color finishes including the traditional anodized makes Crystaline the choice for versatility. And the visual drama increases with through-the-glass mounted Architects’ Classic Hardware from Kawneer for single-source aesthetics. Crystaline. For a great look that depends on where you’re looking.

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Circle No. 367
A Bow to Bahrain

A citation winner in the P/A Awards program, the United Gulf Bank in Bahrain by Skidmore, Owings & Merrill demonstrates that Modernism can respond sensitively to both climate and culture.
Critique

REVOLUTIONS tend to throw out the good with the bad, and the recent revolt against Modern architecture is no exception. The unresponsiveness of much Modern architecture to its physical context and local culture has been widely—and rightly—rejected. But the now prevalent idea that Modern architecture must be anticontextual is mistaken. Indeed, some contextual buildings have lapsed into their own empty formalism, employing the styles of traditional structures while missing the principles upon which the indigenous architecture is based.

The United Gulf Bank in Bahrain, designed by the Chicago office of Skidmore, Owings & Merrill shows what a truly contextual architecture can entail. The building doesn’t resemble the low-rise, courtyard structures that compose Bahrain’s traditional architecture. Nor does it resemble recent Bahrainian architecture, which often uses historic styles as a kind of appliqué. The United Gulf Bank is forthrightly Modern and yet directly influenced by the color, form, organization, structure, and detailing of vernacular buildings. By abstracting the principles of that traditional work rather than mimicking its outward appearance, the architects have created a building that is a part of its place.

They also have created a building that is very much a part of Late Modern architecture. The wall that wraps the building’s front, for example, echoes the screen walls in Mitchell/Giurgola’s work or the billboard fronts in the work of Venturi, Rauch & Scott Brown. And projects by Alvar Aalto or Kallmann, McKinnell & Wood are recalled by the asymmetrical curve and radiating plan.

What follows is a description of the building and the process of its design by Adrian Smith, the Design Partner at SOM responsible for the building.

From his comments emerges a design method that draws from the indigenous architecture, not particular stylistic motifs, but lessons in adaptation to the climate and culture that are then reinterpreted in new forms and materials. It is a method that begins to resolve the conflict between Modernism and contextualism, between abstraction and tradition. And it is a method that, as the United Gulf Bank shows, can produce some stunning architecture.

Thomas Fisher

The Country

Bahrain is an island about five miles from the east coast of Saudi Arabia. A resort area in ancient times, Bahrain is still used as a holiday spot because the country, after being colonized by the English, became much more lenient than other Arab states.

The pearl industry was once very strong in Bahrain, although there is hardly any of that anymore. The same is becoming true of its oil industry. The English discovered oil there around 1925, making Bahrain the first Arab country to pump oil, but its reserves are now being depleted. Most of what the Bahrainis have to do with the oil industry now consists of refineries and things of that sort. In recent years, as Beirut has fallen apart, the country has become the Arab world’s banking center.

The United Gulf Bank stands in a new diplomatic district in Manama, Bahrain’s capital city (facing page). Many of the surrounding buildings have traditional architectural motifs simply applied to their façades. The United Gulf Bank, in contrast, responds to its context in more substantial ways. Because of the intense heat of Bahrain, the building provides a deeply shaded arcade, recessed balconies, and glass fins and light shelves to reduce heat gain and increase daylight in the offices (above). The exposed structure and stepped skyline of many traditional buildings are recalled in the bank’s rear wall (below). The main organizing element of the building is the curved wall that wraps three sides of the structure and serves to hide rooftop equipment.

What sticks in your memory about the place is the color of the landscape and the intensity of the climate. The sea, for example, is not blue, but a beautiful light green, and the desert is light tan in color. The climate is very hot and dusty. There are few zoning ordinances in Bahrain, but one of them requires that every new building have a public arcade to protect people from the sun.

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Progressive Architecture 5.88
The ground-floor arcade (facing page), mandated by code, is mostly enclosed to protect people from the sun. The large openings in the arcade occur opposite the entrances to the bank and the shops. Smaller square openings occur near the ground (which also contain concealed lamps for night lighting) and at the mezzanine level; these openings are angled or flared in plan to modulate the daylight in the arcade. Projecting light shelves (above) help illuminate the ceiling of the arcade and the first office level, with its floor-to-ceiling glass. The typical office interior has fabric-covered ceilings and indirect fluorescent fixtures. The lobby features a stair that gives access to the atrium and that curves around a pool that has a tile pattern similar to the intricate patterns of Bahrainian weavings.
P/A Awards Update
United Gulf Bank

The Contextual Influence
There is a small enclave of historic buildings in Bahrain. The people, however, maintain many aspects of traditional life, even though the country is otherwise very modern. We responded to that context, not directly, but very indirectly, retaining it as a kind of memory in the building.

The traditional architecture, for example, typically has a post-and-beam structure that is expressed on the exteriors of buildings, with infill panels of stuccoed masonry or carved screens. That grid-like system extends up to the top surface of the buildings, where there are often sleeping porches that act as ventilation devices, keeping people cool at night. We recalled this post-and-beam architecture in the bank’s expressed structural grid, which is most apparent in the atrium and on the back alley side of the building.

Because of the intense heat of the place, the older buildings in Bahrain have thick stuccoed walls; small, punched openings; and recessed wood screens. Even the historic streets, especially those used for markets, have wood latticework overhead that is often covered with fabric to provide shade. The traditional architecture also has covered courtyards.

The memory of those things in our building can be seen in the thick wrapper wall, with its recessed windows and balconies, and in the atrium, which is organized as a series of stacked, three-story courtyards to break down the scale of the building and to create spaces comparable to those in traditional houses.

The bridges that span the atrium have glass block floors and, like the wood screens that cover the openings in the older houses, let in a diffuse natural light during the day. At night, the bridges glow from the hanging fixtures that provide both uplight and down. The square at the center of each bridge contains a small pool, like the pools that you sometimes see in the courtyards. Unfortunately, because the pools have glass bottoms, it is very easy to step in them. I’ve gone in three times; the photographer, twice.

The fountain in the lobby is lined with tile in an intricate geometric pattern that recalls the marvelous geometric patterns of the bags and weavings that you find in Bahrain. Other repetitive patterns are used on the air supply and return grilles.

While the fishing and pearl industries have declined in Bahrain, people still have boats—called dhow—that they pull up on the beaches and actually live in. These boats have a distinctive shape that you can’t miss when you go there. Our site, when you curved its corners, had the same shape as the back of those boats; by holding the edge of the site, the building recalls a shape that is very much a part of the Bahrainian context.

We also tried to incorporate the colors of Bahrain landscape in the building. The green Solex glass in the vertical fins, for instance, is the color of the ocean there. And, to match the color of the desert and the indigenous architecture, we used local sand in the precast concrete.

The atrium (facing page) forms the heart of the building. It is divided into three, nearly cubic volumes by bridges that have glass block floors, allowing daylight to filter into the space from skylights. Fixtures that hang below the glass block make the atrium glow at night. Each floor of the building has a small reception area (below) that overlooks the atrium. A wood dome defines the space in front of the reception desk and, like the semicircular seating in the reception area, recalls the curved shape of the building. The offices (above) are generous in size; many have conference tables or lounge areas. The curved light scoop illuminates the coved ceiling during the day, while lamps concealed within the scoop provide lighting at night. Patterned wood panels cover the mechanical plenum.

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P/A Awards Update
United Gulf Bank

Design Development
The site is in a new section of Manama (the capital city of Bahrain) in an area called the diplomatic district. Many of the buildings in the area have been designed by local architects who tend to respond to the architectural tradition of their country by applying its stylistic elements to their buildings in a very superficial way. A few clients, however, come to the U.S. for their architectural services, which may depend upon the sophistication of the clients and whether they have been here.

When the United Gulf Bank came to us, they did not want a typically American building of glass and steel; they wanted something that was rooted in indigenous Islamic architecture. We looked at several alternatives—as we always do—during the early design stages. One alternative had a symmetrically curved form with an atrium and the core along the back, but when the client saw it and said that it looked like a perfume bottle, that killed that one. Other schemes had the courtyard spaces along the outside wall of the building, but we eventually rejected that because it made more sense to use the atrium to bring light into the core of the building rather than use it where we already had light. We ended up using the placement of the core and atrium in the perfume bottle scheme but with an asymmetrically curved front that more closely followed the site.

We also studied various fenestration ideas, including a Corbusian scheme with precast brise-soleils and schemes that packaged windows into double- and triple-story frames. We finally arrived at the idea of creating a wrapper wall with recessed windows.

We developed the light scoop fairly quickly. Since the flush glass at the front of the light scoop would have been the brightest surface in the room, we soon determined the shape and depth of the scoop by ensuring that the glass could not be seen from any point in the room. On the interior, the cove ceiling was originally shorter to provide plenum space for ductwork, but we eventually moved the cove back to bring daylight deeper into the space.

Although we gave the recessed view windows a silver reflective insulating glass, we still had to shade it from the intense western sun. We first looked at horizontal sunshades, but didn’t feel that that was right, and then went to thin vertical fins, but the client didn’t like that because they would block the view. The concern with the view led us to the use of heat-absorbing glass fins that do not touch the glass wall to prevent heat transfer. Only about 11 percent of the heat from the sun now actually makes it into the building. We built a large model of a typical office and tested it under various lighting conditions because we were not absolutely sure that the daylighting scheme would work. But it does. (See Selected Details, p. 179.)

The bridges that divide the atrium into three-story sections (above) break down the scale of the tower, provide a place for employees to meet and relax, and recall the courtyards of similar dimensions found in traditional Bahrainian architecture. The rear wall of the building faces an alley and so is largely windowless, although the part of the atrium above adjacent buildings (facing page) is nearly all glass. This glazed volume has steps sides that recall the stepped battle-ments found in older Bahrainian structures and provide a higher ceiling for the executive lounge areas that overlook the space. The glass block bridges have central, glass-lined pools that have proven to be somewhat of a hazard. Vertical and horizontal grilles serve as the air supply and return registers and repeat the double columns and beams of the building’s rear wall.

Project: United Gulf Bank, Manama, Bahrain.
Architects: Skidmore, Owings & Merrill, Chicago (Adrian Smith, Design Partner; William Drake, Project Partner; Larry Oltmans, Studio Head; William Larson, Project Manager); Pan Arab Consulting Engineers.
Client: United Gulf Bank
Site: 12,400-sq-ft site in the Diplomatic Area of Manama. The climate is characterized by extreme heat, dust, and a strong sun.
Program: provide 100,000 sq ft of space to include executive offices and boardroom, a trading room, employee dining area, and an apartment for the bank chairman.
Structural system: moment-connected steel frame on spread footings.

Major materials: precast concrete cladding; marble base; reflective, heat-absorbing, and translucent glazing; glass block floors in bridges; fabric ceilings with fluorescent uplights. (See Building Materials p. 175.)

Consultants: Skidmore, Owings & Merrill, interiors and structural; Pan Arab Consulting Engineers, mechanical; Jules Fisher & Paul Marantz, lighting.

General contractor: Shinizu Construction Company.
Costs: Not available.
Photos: Nick Merrick, Hedrich-Blessing; photos of Bahrain by Adrian Smith.

Environmental Context

The office floors, in the early schemes, were laid out in a rectilinear fashion with a corridor running around the atrium and small rotundas at the corners. But when Pat (Patrick McConnell, an Associate Partner at SOM) got involved, he reorganized the interiors around a thick wall that follows the curve of the façade and separates the offices from secretarial areas.

Program: provide 100,000 sq ft of space to include executive offices and boardroom, a trading room, employee dining area, and an apartment for the bank chairman.
The Risk Factor

Can a big furniture company benefit from avant-garde design? Rolf Fehlbaum is doing his best to see that it happens at Vitra.

DESPITE the explosion of interest in innovative furniture design over the last few years, big manufacturers are increasingly cautious about producing anything that isn’t a sure bet. Several of them have flirted (seriously or not) with bankrolling new design experiments, but even the most starry-eyed companies seem to give in to “market pressures” and give up on the avant-garde.

So why is Vitra International, one of Europe’s largest producers of office seating, taking the plunge now? It is because Rolf Fehlbaum, the Swiss company’s 47-year-old president, believes that you can have it all: commercial success and cutting-edge design. Commercial success means selling $64 million worth of chairs (by masters like Charles Eames and Mario Bellini, themselves no strangers to innovation) last year. Honing the cutting edge is Vitra Edition, a program Fehlbaum initiated to commission limited-run, experimental furniture from an impressive list of art and design stars. The list: Ron Arad; Richard Artschwager; Scott Burton; Paolo Deganello; Frank Gehry; Shiro Kuramata; Gaetano Pesce; Denis Santarchiara; and Ettore Sottsass.

And that’s not all. British architect Nicholas Grimshaw designed Vitra’s main factory in West Germany. Claes Oldenburg and Goosje Van Bruggen created the sculpture in front of it. Frank Gehry is at work on another factory, and a museum for the enviable collection of 20th-Century chairs that Fehlbaum has been amassing for the company. And another British architect, Eva Jiricna, is designing an office building.

Such is Vitra’s seemingly swift transformation from a top-drawer but conservative chair producer into one of the most aggressive and discriminating patrons of design in the furniture industry. But in the last decade, we’ve seen similar undertakings, fueled by lots of money and good intentions, fizzle.

What makes Rolf Fehlbaum think he can succeed where others have failed?

If environment counts for something, then Fehlbaum has a definite advantage. He grew up with contemporary design—some of the best. In the mid 1950s, Vitra, a family-owned business, became the Swiss, German, and Austrian licensee for Herman Miller, which was producing the pioneering designs of Charles Eames under the leadership of D.J. De Pree and the critical eye of George Nelson (who also designed for the company). Acting

Vitra’s recent, award-winning advertising campaign paired famous people and Vitra chairs; fashion designer Issey Miyake (above) reclines in Shiro Kuramata’s How High the Moon expanded metal chair, part of the Vitra Edition program.
as an interpreter for his parents, the teen-aged Rolf Fehlbau got to know and idolize Charles and Ray Eames, Nelson, and Alexander Girard. Today, his furniture collection includes rare examples of these designers' work, and Fehlbau can tell you in detail just what made their designs so important.

Fehlbau didn't join the family business until 1976. During the 1960s and 1970s, Vitra diversified slowly, producing Verner Panton's one-piece, molded-plastic chair in 1968, and introducing the influential Vitramat ergonomic office seating by Wolfgang Müller-Deisg in 1976. One of the company's top priorities was to create an identity for Vitra beyond the Eames products for which it was so well known (and which still account for a substantial portion of sales for Vitra, now the sole European licensee for the Eames line). The "breakthrough" in this effort was Mario Bellini's line of office chairs, introduced in 1984. The chairs, with their sophisticated, anthropomorphic design, proved a wise move both for Vitra's profile and its profits.

Since then, Fehlbau's energies have been aimed at developing more products (a Bellini table line will be introduced next month at NEOCON 20, and Italian architect Tony Citterio is at work on a new seating line), introducing Vitra Edition in a series of international exhibitions, and searching for designers with "a strong personal vision."

Vitra sounds like a one-man show, and, to a certain degree, it is, largely because of Fehlbau's strong personal vision—and equally strong opinions. He criticizes big American manufacturers for their tendency to produce design by committee, and for their recent preoccupation with acquisitions. He hasn't much patience, however, for the smaller, "boutique" operations that assemble big-name designs for maximum press coverage. "A purely public-relations motivation dooms a company to failure," Fehlbau argues. "Good design has to come from real feeling."

That belief, coupled with his insistence on close involvement in product development, earn him high marks with those who design for the company. Mario Bellini, no stranger to corporate clients and a sharp critic himself, calls Fehlbau "a very special entrepreneur, who believes that design is not just an added value of a product, but is the value."

Still, the big question is: will it work? We tend to forget that Herman Miller in its golden Eames-Nelson age was a much smaller company than it is today. Vitra is already a big company, its success in the mainstream unquestioned. It can afford an experiment here and there, and the Edition program is one such experiment, allowing designer and manufacturer to pursue design research without casting a nervous eye at sales projections. Whether an Edition piece sells a thousand or one is not the point; nurturing new ideas is.

Interestingly, Fehlbau wants someday to integrate the Edition into Vitra's mainstream production. At this (admittedly early) point, however, the pieces—with some notable exceptions—still emanate the rarefied air of the gallery. But Fehlbau knows that the road from think tank to production line is a long one; you won't see him trying to sell Frank Gehry's cardboard chairs to specifiers at the next Orgatechnik. If, however, Fehlbau can successfully integrate the spirit of true invention into mass-produced objects that both serve and humanize the workplace, then he will be making a contribution to contemporary design worthy of his idols, Eames and Nelson. Pilar Viladas
Vitra product lines

Vitra's current production in Europe includes Charles Eames pieces, such as the Aluminum Group swivel chair (facing page, top), and the Wire Chair (facing page, middle) which are marketed under the name of Vitra Classics, and for which Vitra is now the sole licensee in Europe and the Middle East. Vitramat, a pioneering line of ergonomic seating (example, facing page, bottom), designed by Wolfgang Möller-Dosig, was introduced in 1976. (In the U.S., Vitra Seating, Inc., operates as part of Stendig International, through a joint venture agreement between Vitra AG and Stendig Industries. Vitra Seating sells the Vitramat and Bellini lines in the U.S., but not the Eames pieces, which are, of course, made here by Herman Miller.) An important part of Vitra's product line is the series chairs designed by Mario Bellini and introduced in 1984. Persona (this page, top left and right) features a fully synchronized mechanism that allows the chair to adjust automatically to the sitter's movements; the only lever on the chair is for height adjustment. The chair, which Bellini conceived of in anthropomorphic terms ("it should be body-like, not machine-like") has contrasting stretch fabric at the point where the back flexes. The Figura chair (middle left and right) has a removable slipcover and padded "belt" that, like the upholstery of Persona, can be purchased in a variety of contrasting color combinations. A third chair, Imago (not shown here), is an executive "cousin" of Figura. Bellini's newest design for Vitra is the Forum line of tables (bottom left and right), which will make their American debut this June at NEOCON 20. Here, Bellini's application of architectural principles to a familiar office furniture type "fulfills basic ergonomic requirements without lapsing into schematic conformism," in the architect's words. Slender cylindrical bases or more muscular aluminum-section columns support tops in several finishes, such as the pearwood veneer with black inlay edging, Bellini's fond reference to Biedermeier furniture. The black square on the edge of the table serves as a "joint" for the edge veneer and inlay.
Vitra factory, Weil-am-Rhein, West Germany
Vitra’s main factory in Weil-am-Rhein, West Germany (photos this page) was designed by the British firm of Nicholas Grimshaw & Partners in 1981. This building replaced one that had been destroyed by fire, leaving the company with six months to rebuild before its loss-of-production insurance coverage ran out. Grimshaw’s fast-track design for 102,220 sq ft of manufacturing space and 25,824 sq ft of offices and showroom concentrated building services in towers placed outside the building. A double-layered, composite metal skin applied to the precast concrete frame allowed the factory to start production as soon as the inner layer was in place. Visitors to the factory are greeted by the sight of Balancing Tools (top left), a sculpture created by Claes Oldenburg and Coosje van Bruggen in honor of the 70th birthday of Rolf Fehlbaum’s father. Installed in 1984, the giant pliers, hammer, and screwdriver—“Basic tools, as emblems,” explains Oldenburg—create a gate that mediates between the industrial building on one side and the rolling farmland on the other. Another reference to the factory’s bucolic setting is the “slightly organized” depiction of the painted steel tools, with their “wiggly” outlines: A more personal representation for Oldenburg and van Bruggen involves the tools as symbolic reference to the three spirits of Basel (Vitra's home base)—a wild man, a gryphon, and a lion, who dance on a raft in the Rhine.
Factory expansion and chair museum, Weil-am-Rhein, West Germany.
Frank O. Gehry & Associates of Venice, Calif., designed a 100,000 sq ft new factory for Vitra, adjacent to the existing factory (site plan below), and a museum (right), to be built in honor of Rolf Fehlbaum’s mother. The museum will house the ever-growing collection of 20th-Century chairs that Fehlbaum has been energetically assembling over the last few years. The plaster-clad museum, which will sit in front of the factory “like a piece of sculpture,” as Gehry says, is essentially a rectilinear form with a few twists—most striking of which is a cruciform, zinc-coated skylight. A curved canopy of the same material crowns the entrance, and exit stairs are pulled away from the building, as they are in Gehry’s design for the factory—a typical Gehry move that is, in this case, also a nod to the service towers in Grimshaw’s building.

Gehry calls the Vitra project “one of the most exciting things I’ve worked on.” He met Fehlbaum when he went to the Vitra factory to advise Claes Oldenburg and Coosje van Bruggen on the siting of Balancing Tools. Subsequent meetings between Gehry and Fehlbaum led to the factory/museum commission, as well as to the inclusion of one of Gehry’s cardboard chairs, Little Beaver, in the Vitra Edition program.
Vitra Edition

Vitra Edition is an ambitious program in which designers and artists are given the opportunity to experiment with new forms, materials, and technologies, "released from the constraints of the marketplace," in the company's words. While Vitra's considerable technical wherewithal is available to Edition designers, limited production keeps manufacturing costs manageable. And while some Edition designs will be produced in multiples, others may be one-off pieces.

The first Edition group, which made its European debut last year, is a varied one. Frankfurt designers Uwe Fischer and Klaus-Achim Heine of Ginbande created Tabula Rasa (1), an ingenious table that extends to a length of 15 feet.
Ron Arad's surprisingly comfortable Well-Tempered Chair (2) is made of sheets of tempered steel that are folded and bolted together with wing nuts. Artist Richard Artschwager's Chair/Chair (3) makes the archetypal snowshoe chair big enough for two. Milanese designer Paolo Deganello's Documenta Chair (4) is a startling juxtaposition of steel back and wicker seat. Frank Gehry's Little Beaver chair (5) is another of the architect's experiments with corrugated cardboard.

Gaetano Pesce's molded fiberglass Greene Street chair (6) has eight slender steel legs on foam feet; the facelike cutouts in its back embody Pesce's view of a chair as a "mask" worn by the sitter. Italian designer Denis Santachiara created The Sisters (7), three deceptively ordinary-looking office chairs (only one shown here). One changes color when touched; another moves when spoken to; a third changes shape when sat upon.

Ettore Sottsass's Teodora chair (8) of plastic laminate and plexiglass is what Vitra calls his "first contribution to the subject of the chair in the language of Memphis." Scott Burton's Soft Geometric Chair (not shown) embodies his characteristic geometries in surprising fabric-covered foam.

The next Edition series is in the works, with more from Ron Arad, including his steel School Chair (9), which rocks forward as well as back; Shiro Kuramata; Czech designer Borek Sipek; Alessandro Mendini; and Coop Himmelblau, among others. The Edition's U.S. premiere is scheduled for this October, at Designer's Saturday.
Natural Progressions

An entry to a natural preserve in Puerto Rico is carefully calculated to lead the visitor through a processional experience.

ON first observation, it might seem strange that architect Luis Flores of Torres Marvel Flores, San Juan, has designed the entry facilities for a natural park with such a rationalistic appearance. Given the program, one might have expected a more “user friendly” approach, the welcoming cuteness usually associated with such facilities. However, the client, the Municipality of Caguas, did not want that. The small, handsome city not far from San Juan already has abundant charm from its Spanish heritage.

Although the gateway to Turabo Park is strictly Modernist, allusion to historical precedent is not absent; in fact, such considerations were crucial to the overall conception of the facility. Because this is the entry to a vast 300-acre mountainside preserve, Flores felt the complex should have a strong presence of its own, so that it is not subsumed within the larger drama of the dynamic site. Consequently, a classical proportional system is used to intensify the articulation of bold reinforced concrete forms, which are further emphasized by strict adherence to an overall orthogonal organization.

In designing the complex, Flores says he often had historical precedents in mind. Because he thought of the facility conceptually as a temple form, the complex, sited on its own 13-acre mountainside mesa, is gently terraced, establishing a processional sequence that culminates at a fountain/pond. It is from this spot that various parts of the facility radiate in a pinwheel (but orthogonal) arrangement. There is a definite ritual/processional aspect to the plan.

Eventually, a restaurant will be developed at the top of the mountain; the chairlift to take visitors there is already in operation, for those who wish to walk down the nature trails. In discussing the relationship to the terrain, Flores mentions Luigi Vanvitelli’s great palace at Caserta, Italy, where a terraced waterway stretches over two miles from a mountaintop source. There, as at Caguas (where the procession actually begins at the parking lot), the whole is conceived as one interrelated, elongated ensemble. Caserta does not provide the only Italian historical reference, however. Mantua also comes into play when Flores “lifts” one of Giulio Romano’s loggias from the Ducal Palace—there scaled for dwarfs, here, just as delightfully, for children—for the playground.

Over much of the main building, the architect has placed a large wood trellis that is supported on reinforced concrete columns and held in position by cables. Eventually this will be overgrown with lush tropical vegetation, as will much of the complex. Then it will become a truly fitting gateway to this strangely beautiful place. David Morton

The author, formerly P/A Executive Editor, is Senior Editor at Rizzoli International Publications.
From the entrance plaza at the southwest side of the building (above), one can clearly see how the structural system of cast-in-place concrete is used very straightforwardly to emphasize the articulation of columns, “windows,” and “walls.” Concrete block pavers, separated for grass to grow between them, have been used to handsome effect here and elsewhere throughout the complex. In the far distance (top left in photo) is the chairlift, which takes people up the hill slope to a station from which they can walk down.

The facility, although on the side of a mountain, occupies its own 13-acre mesa site. This flat location allowed a strict orthogonal organization of the complex, which serves to place it in sharp—and flattering—contrast to its lush tropical surroundings (right).

The wood-slatted canopy over the administrative section of the building shades office and service areas (facing page) and serves as a backdrop to the amphitheater.
Just beyond the front entry area and just inside the complex (top right), one can see the beginning of the extensive system of terracing that is used to articulate different parts of the park, such as the amphitheater, the office, the playground, and the recreational area.

On the second level of the administrative section, facing out over the amphitheater (bottom left), one can see how surprisingly effective the canopy is as a sun screen.

Looking from the Lake Plaza toward the northeast, rear wall (bottom right), one sees most clearly the extensive system of terracing. Here, such plants as papyrus and water lilies will grow in abundance. The lake comes right up to the loggia contained within the rear wall, where one will be able to step down into the water in a way that is sometimes seen in ancient temples of Egypt or India. The metaphor of the ancient temple, in fact, was a conscious one in the architect's mind.

One of the most ritualistic and odd, but thoroughly delightful areas of the entire complex is the child-scaled loggia in the playground area (top left). Of this, architect Flores says he was not oblivious to certain allusions to Italian baroque.

Project: Turabo Regional Park entry facilities, Caguas, Puerto Rico.
Architects: Torres Marvel Flores y Asociados; Luis Flores, project architect.
Client: Municipality of Caguas.
Site: a high rectangular 13-acre mesa on the southwest side of a mountain rising from 100 to 300 feet above sea level.
Program: a recreational park/ play ground with an amphitheater, horse riding facilities, and a chairlift to the mountaintop. The complex is designed to be closely integrated with the natural surroundings, and to act as the gateway to a 300-acre natural park.
Structural system: reinforced concrete post-and-beam bearing system and retaining walls; columns support cable-held structural wood trellis.

Major materials: exposed concrete and concrete block walls, tubular steel and wire mesh gates and grilles, laminated wood beams, trellises, and stable roof.

Consultants: Jose Morla & Associates (phase I) and Torres Marvel Flores (phase II), structural; Rodriguez y Negron (phase I) and Pablo Rios Vega (phase II), electrical.

General contractor: Nevarz Construction.
Costs: $1.9 million; $50/sq ft, covered space, $211/sq ft, open spaces.
Photos: Gil Amiaga except as noted.
THE University of California is one of the largest university systems in the country. Its nine campuses—Berkeley, Davis, Irvine, Los Angeles, Riverside, Santa Barbara, Santa Cruz, San Diego, and San Francisco (a medical school only)—accommodate 140,000 students. And, for architects, it has become one of the biggest clients in the state, if not the country. Right now, the system has over $1.5 billion worth of buildings in design or construction, and forsees spending $400-500 million a year (including state and increasingly important non-state funding) over the next several years. One campus alone—UCLA—will have $1 billion in the works during the next decade.

Why the sudden building boom? A combination of several factors is at work. First, student enrollment, contrary to earlier predictions, continues to increase. Not only has the college-age population within the state remained steady but an influx of superbly qualified Asian students has swelled the rolls, as have large numbers of out-of-state applicants who seek high-caliber academic programs for considerably less than the spiraling costs of many private universities. Enrollment is increasing so quickly, in fact, that there is talk of adding a new campus to the system.

This surge in the student population exacerbated an existing shortage of space. A ten-year hiatus in new construction in the 1970s left the system with inadequate facilities for both academic and housing programs, and the various campuses are now scrambling to catch up.

Not only has the pace of building changed but the kind of architects being considered for projects has changed. With the notable exception of Santa Cruz, a campus planned with the express intention of harmonizing with its lush physical environment, many other campuses were expanded during the 1950s and 1960s according to Modernist planning and design strategies that often produced mediocre buildings in placeless surroundings. In trying to restore a coherent "urban" fabric—several UC campuses resemble small cities in their size and complexity—the university's new, energetic generation of campus architects (the people who do the selecting) is looking to an equally new generation of outside architects, who are concerned at once with traditional planning methods and more radical architectural forms.

For now, this philosophical shift is visible mostly in small commissions, which are being given increasingly to smaller, younger firms. Buildings with a project cost under $5 million do not require design approval by the state's Board of Regents; they are approved by the system's Office of the President. Projects under $1 million can simply be approved by the individual campuses.

The big commissions, for such buildings as research laboratories, business schools, and science facilities, still go to relatively larger firms; clients are understandably reluctant to gamble when $40 million and complex technical requirements are at stake. But even there, the kind of firm being chosen is changing. For example, the firms of Moore, Ruble, Yudell and Venturi, Rauch & Scott Brown—neither one of which has ever been content to promote the status quo—have major commissions at UC campuses.

These changes seem to have generated a fair amount of political turbulence within the system, a fact many architects will confirm (although none will go on record on the subject). The issue of how to balance established local firms with up-and-coming small firms or high-profile out-towners is a sticky one, yet it's clear that a greater degree of design diversity is a UC goal. "The state is taking more interest in the quality and longevity of design," says David Neuman, Associate Vice Chancellor for Physical Planning at UC Irvine. But if the home teams bristle at the sight of star firms like James Stirling, Michael Wilford & Associates, I.M. Pei & Partners, and Ricardo Legorreta on the rosters of UC's architects, they should also be assured that the system doesn't intend to sponsor yet another architectural beauty contest. "My first priority is not just hiring high-profile architects; it's campus-building," asserts Charles Warner Oakley, UCLA's campus architect.

On the following pages, we illustrate a few of the dozens of new buildings now in the works at four of UC's nine campuses—Irvine, Los Angeles, San Diego, and Santa Cruz. In presenting what we hope is a balance between large projects and small, we hope to give an indication of the range of building types and design strategies that are shaping the next phase of UC campus design.

Pilar Viladas, Susan Doubilet
The UC Irvine campus was founded in 1964, its physical form based on a long-range development plan by Pereira Associates. Academic "malls" radiate like spokes from a central ring mall 9/10 mile in circumference; each spoke accommodates a different academic discipline. At present, the Office of Central Planning is revising the development plan, assisted by consultants that include Pereira Associates, SWA Group, and, for the spokes, Robert A.M. Stern, Frank O. Gehry, Moore Ruble Yudell, and others. The primary aim is to humanize the original monolithic forms, and to develop an identifiable character for each mall. Undergraduate housing facilities will form infill among the spokes. Circulation patterns, including entrances to the campus, are being revised. Projects worth about $350 million are planned at this time. Among them are:

1. Dance Facility. Architects: Robert A.M. Stern Architects, New York, with the Lee/Naegle Partnership, Dana Point, Calif. Completion date: Spring 1989. Construction costs: $13.4 million. This 8600-sq-ft facility is the first phase of the expansion of the University's Fine Arts Complex, the master plan of which was prepared by Stern with SWA Group, Laguna Beach. The Phase I structure, housing offices and rehearsal spaces, uses light metal-frame techniques to provide moderately priced open loft space. The building provides a new front door to the complex.


3. Central Housing Office Building. Architect: Eric Owen Moss, Architect, Culver City. Completion date: July 1988. Construction costs: $650,000. This 6730-sq-ft administration building, with a concrete block base, walls of cement plaster, and roof and one wall of white-painted, red-splattered steel, is situated at a major campus entry point. Two gable-roofed volumes suggest the radial inner campus and the orthogonal outer campus grid.


Not illustrated here, but also planned are: A $1.3 million Student Services Building addition by Siegel, Sklarek, Diamond Architects, Los Angeles, and the $4.6 million Graduate School of Management by Bissell Architects, Newport Beach, with Venturi, Rauch & Scott Brown, Philadelphia (both to be completed in 1988); the $9.2 million Graduate Student Housing by Fisher-Friedman Associates, San Francisco, and the $15.9 million Unit 5 Residence Halls by Escherich Homsey Dodge & Davis, San Francisco, and the $24.3 million Physical Sciences II, by MBT Associates, San Francisco (all three to open in 1989). The $35.6 million Biological Sciences Unit II, by Arthur Erickson Associates, Los Angeles, will be completed in 1990. The $25 million Science Library, by IBI Group/James Stirling, Michael Wilford Associates, London, will open in 1992. Also in the works is the UC Irvine Main Street (P/A, Jan. 1988, pp. 125–127), by Pereira Associates, Los Angeles. And Phase III of the University Extension Facility and Alumni House, by Charles Moore, Urban Innovations Group, Los Angeles, is now under consideration.
UCLA, which was founded in 1919, moved to its present Westwood campus in 1929. Its original master plan, by George W. Kelham, was an axial Beaux-Arts scheme with Italian Romanesque-style buildings by Kelham and Allison & Allison, who replaced Kelham as supervising architects in 1935. From 1948 to 1968, Wurdmann and Becket (later Welcker Becket, now Eliebe Becket) served this role. After World War II, Modernist architectural and planning principles produced a preponderance of banal and insensitive buildings on the 411-acre campus, which now accommodates 30,000 students. By the early 1980s, UCLA had evolved from a “commuter” school into a major research institution; this change, coupled with an increasing scarcity of new building sites, focused greater attention on design as a key campus issue. Among the $300 million worth of buildings now in design or construction are:

1. UCLA Gateway, Phase I. Architects: Hodgetts & Fung, Santa Monica. Completion date: December 1989. Construction costs: $1.7 million. This project uses landscape and architectural elements to restore the original campus texture to the main, Westwood entrance. A greenward, marked by information kiosks, extends into Westwood, and formal steps and fountains give focus to a series of courtyards.


4. Outpatient Care Center. Architects: Mitchell/Giurgo Architects, New York, with Daniel, Mann, Johnson & Mendenhall, Los Angeles. Completion date: June 1990. Construction costs: $56 million. This 360,000-square-foot clinic, part of the Ambulatory Care Complex whose site plan and parking structure were designed by Ross-Wou International/MTB, Los Angeles, shares a corner site opposite the Medical Center with two other planned medical buildings.

5. Northwest Housing/Parking, Phase I. Executive architect: Gensler & Associates, Los Angeles. Design team: Barton Myers Associates, Los Angeles, team leader; Antoine Predock Architect, Albuquerque; Esherick, Homsey, Dodge & Davis, San Francisco. Completion date: Summer 1991. Construction costs: $45 million. 1260 students and 10 faculty families are housed in three lowrise blocks (by Myers, EHDD, and Predock, respectively); each block is a series of houses around a courtyard. The project also includes a parking structure and a commons building with dining hall and conference center, by Myers; and a convenience store/cafe, an auditorium, an Office of Residential Life, and a faculty residence by Predock.

Not illustrated here are: The $10 million Doris Stein Pavilion, by Eliebe Becket, Santa Monica; the $38 million School of Engineering expansion, by Leo R. Daly with KDG, Los Angeles; the $1.2 million Central Ticket Office by Appleton Associates, Venice (all to open in 1990); the $6 million School Addition by A.C. Martin & Associates, Los Angeles; the $11 million Mental Health Center (Ambulatory Care Complex), by Kurt Meyer Partners, Los Angeles (both of which will open in 1990); and the $28 million Chemistry and Biological Science Addition by Anshen & Allen, Beverly Hills (set to open in 1991).

New projects include: The $50 million, 280,000-square-foot Anderson Graduate School of Management, by Hines N. Cobb of I.M. Pei & Partners with Leidenfrost/Horowitz & Associates, Los Angeles; and the $9 million, 55,000-square-foot International Center, by Ricardo Legorreta, Mexico City, with Leason, Homsey & Associates, Los Angeles.
UC San Diego, founded in 1912, was established on its present campus only 25 years ago. After substantial growth in the 1960s and a go-slow period in the 1970s, UCSD began a major expansion project in the 1980s, like the other UC campuses in response to the state's recognition of baby boom needs. Unlike some of the older campuses, UCSD had room to grow. A long-range plan was drawn up, but this was only a general roadmap, indicating where academic needs were to be met on the campus. Recently, SOM San Francisco and retired Dean Richard Bender of UC Berkeley's School of Architecture were commissioned to prepare a master plan. Projects now in the design stage are being informally reviewed for compliance with the principles of the not quite complete master plan. Currently, projects costing about $150 million are under construction, and others amounting to $250 million are in the planning stages. Only a portion of these funds are state provided. Among the planned projects are:

1. Graduate School of International Relations and Pacific Studies. Architects: Clark Beck Associates, San Diego; Kaplan/McLaughlin/Diaz, San Francisco, design. Occupancy date: Late summer 1989. Construction costs: $7.2 million. UC's first school of international relations, and the first U.S. school focused on Pacific studies, this 64,000-sq-ft complex is composed of three stucco (possibly stone) buildings around a plaza. It will house the special study center, teaching and research space, faculty and administrative offices, a library, and a multipurpose meeting space.

2. UCSD Forum Theater. Architect: Antoine Predock & Associates, in association with CLEO Architects, San Diego. Completion date: May 1990. Construction costs: $3.5 million. The second theater in a complex of three performance, rehearsal, and teaching facilities shared by the University of California at San Diego and the La Jolla Playhouse, this 30,000-sq-ft building will contain a 400-seat thrust-stage theater and two rehearsal studios. Theatergoers will enter the concrete masonry building by passing through a mirrored glass wall off a clearing in the eucalyptus forest.


4. Molecular Biology Research Facility Unit II, UCSD Howard Hughes Medical Institute. Architects: Moore Ruble Yudell Architects and Planners, Santa Monica. Associated architects: Ratcliff Architects, Berkeley. Completion date: May 1989. Construction costs: $8.5 million. This 80,000-sq-ft building, of concrete block and glass, will contain labs connected by a central equipment corridor, a spine of special use rooms, and offices. A bridge will connect it to the existing Unit I, with which it will share animal facilities housed in the basement. A central glass-roofed atrium is planned as the social heart of the laboratory, in response to the users' request for openness and spontaneous meeting spaces.

UC Santa Cruz was established about 20 years ago. In the planning of the 2000-acre campus, The University had, and still has, as its primary goal building in harmony with the landscape. The magnificent landscape is, in any case, difficult to ignore: Its lower part is characterized by open meadows, grasslands, and rolling hills; its upper land dense with redwoods and slashed by deep north-south ravines, with breathtaking views of the coast and Monterey Bay. Landscape architect Thomas Church was instrumental in laying out the early campus, and good designers—among them Joseph Esherick for Stevenson, one of the first colleges, and Charles Moore and William Turnbull (MLTW Associates). Located in a small clearing off Kresge's main street, the one-story wood-frame building is designed to complement the existing informal architecture.

4. College 8. Architects: Simon Martin-Vegue Winkelstein Moris, San Francisco. Site planning/landscape architect: Wallace Roberts & Todd, San Francisco. Completion dates: Phase I (housing and dining), fall 1989; phase II (offices and classrooms: January 1990). Construction costs: Phase I, $15 million. The first college to be built at Santa Cruz since the early 1970s, College 8 will provide housing for 750 students, a dining hall (for other social gatherings and teaching functions as well), offices, classrooms, and research space. The plan is organized around a large, terraced central space that acts as an organizing core. While the space is orthogonal, like traditional collegiate environments, the site plan adapts to the steeply sloping site and takes advantage of the view to the coast and Monterey Bay. Forms are diverse: Dormitories are prismatic wooden buildings with vertical siding, lattice-grid bases, and metal windows; the academic and kitchen buildings are orthogonal stucco structures with paired gables; and the dining hall is a geometric pavilion with articulated roofs, terraces, and glazed walls.

Other projects planned for the campus but not illustrated here include: The $750,000 University Club, by Chester Bowles, Jr., San Francisco, to be completed in 1989; and the $26 million Natural Sciences Unit 4, by Zimmer, Gunsul Frasca, Portland, Ore., to be completed in 1991.

3. Kresge College Faculty Office Building. Architects: K+ CZL, San Jose. Completion date: January 1989. Construction costs: $350,000. This 2200-sq-ft structure houses 12 faculty offices. Located in a small clearing off Kresge's main street, the one-story wood-frame building is designed to complement the existing informal architecture.

Progressive Architecture 5:88
Ten months after the building appeared in P/A's Paris issue, the interiors of the Arab World Institute are finally done.

The official opening of the Institut du Monde Arabe (Arab World Institute, P/A July 1987, pp. 72–79) took place in Paris this spring, almost a year behind schedule. The building has proved well worth the wait. With this crystalline structure, architects Jean Nouvel, Gilbert Lezenes, Pierre Sorta, and Architecture Studio gave the Seine’s left bank a monument of our times—the first perhaps since the Pompidou Center was finished in 1977. IMA is also, without a doubt, the last of its generation. The ultimate flowering of some ten years of high-tech architecture, it transcends the high-tech language it mimics to perfection and composes a discourse of the senses and emotions.

The building’s curved façade, which faces the Seine, is hermetic and elusive, slipping past the pedestrian. The main entrance is located on the other side of the building, facing south. But, there is no monumental marking of this “front door”; one simply passes through the glass wall, as if to the other side of a mirror.

As in the tale by Lewis Carroll, magic lies in wait on the other side, in unexpected shifts of scale. In crossing the threshold, compressed between the smooth surfaces of floor and low ceiling, one feels squeezed, almost threatened. Then, suddenly, space explodes upward in a hall that runs the full height of the building, lined with elevators, evoking images of a rocket launching pad.

Here the contrast that defines IMA is declared: Western technology on the one hand, and on the other the veiled lights of Arab culture. This dichotomy is confirmed in the gradual discovery of the building, which is best experienced and understood from top to bottom. The top floor with its public restaurant and private conference room reveals one of the most beautiful views of Paris. From the terrace one understands the plan of the building as a whole: the inevitability of the “fault” that splits it in line with Notre Dame’s spire, and the pertinence of the square plaza that gives the glass box room to breathe.

IMA is at once a cultural center, a museum, and a library. In the public exhibition galleries, the technology of construction is exhibited and exaggerated in powerful, almost overstructured steel pylons that contrast with the light, glazed wall they support. The great volume of the library and its book tower, a Babelic spiral, are filled with a network of changing shadows projected by the south façade. And at the heart of the building lies yet another magical space—the courtyard, surrounded by walls of white marble squares so thin that light seems to rest captive within them. (See P/A, July 1987, p. 78.)

Far below, in contrast to these airy heights, lies the “hypostyle” room, an antechamber that provides access to the auditorium and temporary exhibition spaces below the entrance plaza. Here, the impression of heavi ness, of mystery and shadow, is obtained by the multiplication of structure in five ranks of 25 hollow columns, which collectively create the air of a crypt or mosque.

This room alone distinguishes IMA from other high-tech architecture. While the architects utilize high-tech codes to build their metaphors, IMA is more emotional transcription than direct narration. In this sense, it explores a different aesthetic, a “transmodern” style that Jean Nouvel and his partners have cultivated.

“Technology in IMA is at the service of emotion,” says Nouvel. “It is put to purposes other than its own representation. In certain parts of IMA, layers that are 80 meters apart appear superimposed. When I watch the setting sun through the spiral of the book tower, I tell myself we have created a truly transparent building.”

Marie Christine Loriers
The author is a senior editor of Techniques et Architecture.
The "hypostyle" room (above) functions as a reception hall and vestibule for the adjacent auditorium, meeting rooms, and exhibition galleries (see basement plan, left). The multiplication of structural columns in this subterranean space creates the atmosphere of a tomb or mosque.

Exhibition galleries open to the Parisian public surround an open courtyard on upper floors (see plan, above). On the north side, views of the Seine and the Île Saint-Louis form the backdrop for the double-height museum space and mezzanine (facing page, top). The exhibition cases are conceived as extensions of the architecture in metal, stone, and glass. In the southern galleries (facing page, bottom), the wall of diaphragms, which open and close like camera lenses in response to sunlight, evoke in high-tech terms the patterns of Arab screens.


Client: Institut du Monde Arabe.

Site: narrow slice adjacent to the Université Paris VI, Faculté des Sciences, facing the Île Saint-Louis.

Program: 25,000 square meters of cultural center, including 4400-square-meter museum, 1900-square-meter library, 2150-square-meter offices, auditorium, conference and meeting rooms, public restaurant, and rooftop terraces.

Structural system: metal structure; curtain walls.

Major materials: aluminum, glass.

Consultants: François Seigneur, interiors; Anne Frey, Pierre Martin Jacot, graphics; Louis Gr uitet, engineering; M. Armagnac, acoustics; Jacques Le Marquet, Michel Seban, scenography; Gary John Glaser, children's room; Z.A. Zaidan, architecture; Setec, mechanical; Cabinet Casso Gaudin, security; Epel, diaphragms. Planbloc, bureau de pilotage; Socotec, bureau de contrôle. Cabinet Sery Bertrand, museum consultants; Licht Design, lighting for museum.

Photos: Stéphane Couturier.
The evolution of office chairs has taken a turn from self-conscious ergonomics to something that feels and looks good.

MAN has been sitting for so long you would think he had perfected the chair by now. But, to listen to the cadre of professionals who dwell on matters of chair design, not so—especially when it comes to fulfilling the seating requirements of the modern office.

That's due in part to a lack of consensus about what makes a good chair. Does a correct fit to human form and movement earn top marks? Is a chair's visual appeal more important in an age when fashion often drives popular taste? Or can ergonomics and aesthetics coexist in harmony?

Even those who can agree on the goals for good office chair design often still differ on the means to achieve those goals. If anything appears clear about the direction manufacturers (and their designers) are taking, it is this: Chairs are becoming more responsive to human shape and dynamics, while appearing less self-conscious about doing it.

Designer Niels Diffrient spends countless hours in his rural Connecticut studio tackling the problem. "I like to think that the best objects reach such a state of elegance through the combination of aesthetics and performance that they achieve a higher state of refinement," Diffrient says. "One never works very well without the other."

A Difficult Legacy

Once introduced to the sophisticated computer analyses and materials experiments that precede the manufacture of modern office chairs, the newly initiated begins to see most chairs designed before the mid-1970s as rather clunky and ill-conceived. Frank Lloyd Wright's three-wheeled chairs for the Johnson Wax headquarters, for example, are just one example of American-designed office chairs that often were indifferent, if not belligerent, toward the notion of sitting comfortably. Products like Charles Eames's "Aluminum Group" chair of 1958 and Charles Pollack's classic swivel armchair, first produced in 1965, were notable exceptions to corporate America's standard issue.

In 1978, Diffrient's first chair with articulated movements hit the market. Response was lukewarm at best. Even though the Diffrient Executive Chair, as the model was called, was designed to support a reclining person properly, the office world wasn't ready for a chair that performed to such standards.

The demand for a high-performance office chair coincided roughly with the arrival of the computer terminal on many employees' desks. Subsequent changes in the nature of work and the workplace prompted the demand for many such chairs.

The response by the mammoth contract furniture companies and a host of smaller firms was incremental. Charles Rozier, vice-president for product development at Knoll International, identifies three stages in the office chair's evolution: "First was the application of an anthropometric approach to the office chair. These chairs either were or appeared to be shaped to accommodate the human form. The second stage involved mechanical changes—the chairs were made to move in an appropriate way. The third stage is an ongoing process. It has to do with the integration of good anthropometrics, proper dynamic behavior, and good aesthetic design. It is essentially getting away from the anatomical model, or making the chair not look like a prosthesis."
Significant in the evolution of the office chair was the release in 1974 of Humanscale 1/2/3 (diagram, facing page), the first of a series of manuals presenting human factors data in a format designers could easily comprehend. Niels Diffrient collaborated on the Humanscale portfolios—later expanded by two additional releases—with colleagues at Henry Dreyfuss Associates, in New York. The portfolios offered information on topics including human dimensions, human strength and safety, seating, controls, displays, space planning, and factors regarding standing and sitting at work. This drawing of “Equa” (left), designed by William Stumpf and Don Chadwick for Herman Miller, represents the generic issues involved in making a good office chair. The chair back (A) should offer support but allow free movement. Arms curve downward (B) so chairs can pull close to desks. Good support of the lower back, or lumbar (C), helps prevent fatigue. Thinking differs on the motion of chair back versus seat (D): Should the two be fixed in the same relative position whether tilted or upright? Should they move independently? Or should they move in separate but proportionate ways? Upholstery (E) should be durable, and stain- and fire-resistant. Replaceable upholstery may be desirable too. A “waterfall front” (F) offers leg support but allows for easy movement and free blood circulation to the lower legs and feet. Knee-tilt mechanisms (G) are standard today. Some models must be locked in an upright position; others resist the tendency to tilt through a built-in “dwell mechanism.” Most chairs require adjustment of the tilt tension (H); only the most sophisticated do not. Pneumatic or mechanical seat height adjustments (I) accommodate short and tall users. A five-star base (J) adds stability to the chair while providing a smaller foundation.
William Stumpf's and Don Chadwick's development of the form for the "Equa" chair's shell was a lengthy, step-by-step process, parts of which are shown here. The first crude mock-up (1), hand made of glass-fiber-reinforced resin, was built to test the split shell's visual and physical capabilities. The experiment proved that the seat and back would, indeed, act independently of each other, while it also revealed the need for added strength in the side members. In the next step, the H-shaped slots were filled with a variety of elastic materials, but none of them adhered well to the shell and all of them decreased its flexibility. Spinning off of the filled slot idea, a composite shell (2) was created by bridging the gaps with a rubber-coated elastic sheet. The result was inelegant, at best, and a technical failure. Refinements in the design led to a form (3) that met the team's desire for a delicate, flowerlike shell. Ideas for partial and full upholstery were pursued beginning at this stage. In the next iteration, side members were designed for strength and the planar sections were thinned for suppleness, producing a shell that "sat right." Attention then turned to the design of an appropriate base and the invention of a production process for what, until then, had been a handmade shell. The first production technique, elastic reservoir molding, resulted in a brittle and unresilient shell (4). Two other techniques, a sheet molding compound method and preforming, yielded results that lacked flexibility, strength, and a proper appearance. Success finally came with an injection-molded shell (5), made by suspending glass fibers in a heated liquid plastic that was then injected into a heated mold. The shell passed Herman Miller's performance tests, as well as the company's demands for strength, flexibility, finish, and production efficiency.
A conceptual drawing (6) by William Stumpf and Don Chadwick preceding design of the "Equa" chair illustrates the ideas behind the split shell, an attempt to make the movements of the chair mesh with the trajectories of human motion. Early studies for Vitra's "Persona" chair (7) investigated placing the synchronous mechanism outside the shell, rather than inside, where it eventually was located. Design of Haworth's "Catalyst" chair included the fabrication of half-scale models sculpted from urethane foam, followed by several reviews before work began on the full-scale prototype (8). Computer drawings (9-11) generated from the full-scale prototypes were used for final tooling of "Catalyst" chair parts. The use of injection molds, as in the prototypes (12) for the basic "Equa" chair, signaled a new development in office chair manufacturing. Detailed working drawings were produced for the shell of the "Persona" chair (13), which was injection molded using a polyamide reinforced with 30 percent glass fibers.

The Rise of Mechanism
The struggle now is to make ergonomic chairs look less ergonomic. But before designers concerned themselves with hiding chair mechanisms, they were preoccupied with inventing them. For decades, a simple chair that swiveled and tilted was considered quite acceptable, even luxurious. But, designers noted, when people tilted back in these chairs their necks tended to stiffen and their feet lifted off the floor, often cutting off circulation to the lower legs and feet. The answer to the second dilemma was the so-called knee-tilt mechanism, which moved the pivot point from beneath the center of the chair to a location just behind the sitter's knee. The invention allowed people to recline while keeping their feet on the floor.

Designers also had begun to make the reclining action more natural to human movement by allowing the chair seat and back to move at different, but proportional rates. The advent of "synchronous movement" in office chairs became a common feature in many chair lines.

But as adjustments proliferated on new chairs, knobs and levers were added to control seat height, tension in the tilting mechanism, reclining position, even the location of the lumbar curve against the back. Customers often complained that chairs were laden with too much gadgetry. Employees couldn't (or wouldn't) adjust their chairs, so they ended up more uncomfortable than they might have been with a simple straight-back chair. The question arose: Were office chairs becoming too technological? "No question they were," says James Welch, president of Vecta. "Now, each year at NEOCON, I am seeing more chairs coming out that are less complicated."

In Search of Self-adjustment
All around, companies have introduced designs for chairs that work for the user without requiring much active participation. The most recent trend has been to develop chairs with shells that flex as a worker routinely bends and turns on the job. In research that eventually led to Herman Miller's "Equa" chair, designers William Stumpf and Don Chadwick pursued a one-piece shell that would strike the delicate balance between strength and flexibility. Their solution turned out to be a compromise between the form—a thin shell with an H-shaped cut-out—and a method of injection-molding a glass-reinforced thermoplastic polyester called Rynite. In their "Catalyst" chair, Haworth opted for a fiberglass-reinforced epoxy resin that, according to product manager Daniel Spans, has the strength of steel, but flexes. (The material was adapted to chairs after being developed for Corvette automobile suspension systems, Spans says.)

In Italy, designer Mario Bellini worked from 1979 to 1985 to produce a version of a chair that would adjust automatically to the user. Dubbed the "Persona" and manufactured in Switzerland by Vitra Seating (see pp. 74-81), it incorporates a flexible, one-piece shell that is articulated to function as a hinge.

In many cases, manufacturers have committed themselves to refining chairs that are proven winners. Technicians at Haworth developed what they call a "dwell device," a mechanism that resists a chair's tendency to tilt back, without requiring the user to lock the chair in the upright position. Simply a shift in weight allows the chair to tilt back. Spans calls the development "a move away from active ergonomics."

Most American manufacturers take pride in the fact that they meet, and often exceed, the minimum safety and performance standards of BIFMA, the Business and Institutional Furniture
The final resolution of chair designs requires integration, and testing, of many components. An exploded drawing of "Persona" (14) shows the curved arm rests that control the synchronized movement of the chair seat and back. The "Catalyst" chair's "dwell mechanism" (15) resists the chair's tendency to tilt back, but allows tilting if the user shifts his weight. The knee-tilt action of a chair allows a user to recline (16) without lifting his feet uncomfortably off the floor or constricting blood circulation to his feet. This feature eliminates the need for a lever to lock the chair in an upright position. The one-piece polypropylene shell (17) of Steelcase's "Sensor" flexes to accommodate upper body movements, yet portions of it are reinforced with ribs to support the body's weight where support is needed most. The mechanism of "Persona" (18) was refined to operate through the tension and pressure produced by shifts in body weight. Weight on the seat, for instance, controls the counter-pressure of the back support, eliminating the need for a tilt tension knob. Safety and performance standards for office chairs originate with the Business and Institutional Furniture Manufacturer's Association, which prescribes testing procedures (19) used throughout the industry in America. A view inside the Herman Miller chair factory (20) in Zeeland, Michigan, reveals a variety of chair components.
At last, the manufactured chairs, shown here in various stages of disassembly for illustrative purposes. A frontal view of the “Persona” mechanism (21) shows the steel strips that guide the motion of the backrest. The “Equa” chair (22) adheres to the idea that the way objects go together should be immediately and clearly understood. The “Sensor” (23) conceals its flexible shell between an outer casing—made of plastic, as shown, or upholstered—and foam cushion. Typical of current chair designs, it has a variable-density foam cushion that is firm where support is needed, but soft where it is not—on the chair edges, for example.

Manufacturer’s Association. Yet, while the BIFMA standards are voluntary within the industry—not prescriptive to the degree of European national standards, particularly West Germany’s—the rationale that more generic standards will produce more innovation in the end product isn’t borne out by what leaves the assembly line. “American design is very centrist, so mass-market oriented,” Stumpf says. In fact, many European standards, such as the five-star base, have become the norm in American-made seating. And not to everyone’s liking: “I think it’s a minimal improvement in terms of function, and a great disservice in terms of aesthetics,” says designer Richard Schultz, who has done chairs for both Stow & Davis and Domore.

New Directions

So, as the chair continues to evolve, what next? Improvements in foam cushions have come about by adopting injection-molding processes and discarding built-up methods, a change that also allows more sculptural freedom in the foam’s shape. But there is more work to be done here, especially in experiments with varying foam densities to improve comfort levels. Upholstery fabrics, too, are the focus of scrutiny. While advances in fire safety, durability, and stain resistance have been made, the search continues for fabrics with ideal breathing qualities.

But, when most office-chair designers talk about their ongoing work, the theme of human behavior repeatedly crops up. “What the La-Z-Boy is to television, the task chair is to the computer,” says Stumpf, referring to the class of office chair that seems to be getting the hardest look these days. Stumpf’s own time-lapse studies of office workers identified five distinct working positions people adopt at their desks. That constant motion is partly attributable to our lot as animate beings, but also due to the discomfort or confining nature of many office chairs.

With increasing frequency, designers tout the benefits of reclining while working, though some solutions take the idea far beyond others. “Sitting upright is an unnatural thing for the human body,” says Warren Snodgrass, president of Design Technology in Mill Valley, California, and a designer for Haworth. “It puts tremendous pressure on the lower spine, and the way to relieve that is to recline. People are more effective when they are comfortable.”

So don’t be surprised if new models begin to recline a bit more or come with coordinated foot pillows (Stumpf, in fact, already has designed one). Existing chair lines, too, are being refined to improve mechanisms and enhance comfort. But the practice of periodic upgrading, in Stumpf’s words, is a lesson American manufacturers have been slow to learn. As successful models of that approach, Stumpf points to foreign firms such as Honda, Nikon, and Mercedes-Benz—all of which refine products in subtle ways without introducing splashy new lines each year. The idea is worth considering. And if office chairs begin to perform like BMWs, who’s to argue with the results?
Physio-Class Seating employs a chair shell of semi-rigid molded plastic that flexes with upper body movement. Without special controls, it provides support through normal postural changes. The chairs can be fixed to accommodate those who work at screens or in other capacities where the body leans forward. The chair's tilt control is designed to keep the user's feet on the floor during movement, thus reducing stress on legs and knees. VOKO U.S., Inc.

Stackable upholstered chairs with contoured backs and seats provide comfortable yet space-saving seating for meetings and other special applications. They can also be used as side chairs. Available with or without arms, the chair frames come in chrome or in 23 colors. TAB Products.

The Northern Comfort executive chair—available with a high, medium, or low back—features generously cushioned back, seat, and armrests. The swivel-tilt base comes in neutral stainless steel, Brutone bronze, or Richlow bronze. Bruton.

The Synchrono series of seating contains 13 different models, ranging from a mechanical swivel-tilt version to an executive model. Standard features include cast aluminum base and controls, pneumatic height adjustment, and a lumbar adjustment mechanism. United Chair.

Connex seating is based on the principle that improved heat dissipation can improve user productivity. The seat and back shells have perforated inner linings, and outer vents are integrated into the exterior shells. Another distinctive detail is the recessed triangle and stripe seat pattern which may be specified in matching or contrasting colors. Kimball.

Paradigm seating, designed by Dick Schultz, includes three management models based on the same essential shape, with options such as high or low backs, upholstered or metal arms, and three kinds of base finishes. Armless task stools and secretarial chairs are also available. Stow & Davis.

The Catalyst series by Warren Snodgrass features four chair types for four specific office functions, visually linked by details such as its cantilevered chair control and distinctive arm. The chair's unique knee-tilt mechanism allows the back to remain upright unless the user's weight is transferred on the seat plane. Haworth.

The Exel Executive chair is part of a line of thin-profile seating that combines wood construction with ergonomic function. The chairs, which come in executive, management, and guest models, are designed for those above the 95th percentile in body size. The distinctive angled arm allows easier access to work surfaces. Gunlocke.
The Ergo chair utilizes a tear-drop back design to allow a maximum amount of upper body movement. Features include pneumatic seat height adjustment, backrest height and angle adjustment, seat depth adjustment, and optional armrests and footrests. Bases are available in cast aluminum or molded polyurethane. Mayline. Circle 454 on reader service card.

The 634 Montara Executive Chair features a modestly scaled, ergonomically contoured design. Base finish options include textured black, polished aluminum, or painted finish. The 634 has a 36-39-inch back height, while the similar 633 model has a 32-35-inch back height. Metropolitan Furniture. Circle 455 on reader service card.

The Advanced Diffrient Seating Series includes workstation, management, and executive chairs, in addition to a multiple seating series. A 12-page brochure discusses the available options and ergonomic features in each portion of this formally integrated collection by designer Niebs Diffrient. Knoll International. Circle 453 on reader service card.

The Vertebra Systems Chair is a task chair designed to save space while retaining a large seating area. Its seat and backrest width is 18 3/4 inches. Designed by Emilio Ambasz and Giancarlo Piretti, the chair comes in pedestal base or side chair models, with or without arms. Krueger. Circle 446 on reader service card.

(See Technics, The Office Chair, p. 98.)

Small Company’s New Golf Ball Flies Too Far; Could Obsolete Many Golf Courses

Pro Hits 400-Yard Toe Shots During Test Round

Want To Shoot An Eagle or Two?

By Mike Henson

MERIDEN, CT — A small golf company in Connecticut has created a new, super ball that flies like a U-2, puts with the steady roll of a cue ball and bites the green on approach shots like a dropped cat. But don’t look for it on weekend TV. Long-hitting pros could make a joke out of some of golf’s finest courses with it. One pro who tested the ball drove it 400 yards, reaching the green on all but the longest par-fours. Scientific tests by an independent lab using a hitting machine prove the ball out-distances all major brands dramatically.

The ball’s extraordinary distance comes partly from a revolutionary new dimple design that keeps the ball aloft longer. But there’s also a secret change in the core that makes it rise faster off the clubhead. Another change reduces air drag. The result is a ball that gains altitude quickly, then sails like a glider. None of the changes is noticeable in the ball itself.

Despite this extraordinary performance the company has a problem. A spokesman put it this way: “In golf you need endorsements and TV publicity. This is what gets you in the pro shops and stores where 95% of all golf products are sold. Unless the pros use your ball on TV, you’re virtually locked out of these outlets.

TV advertising is too expensive to buy on your own, at least for us. “Now, you’ve seen how far this ball can fly. Can you imagine a pro using it on TV and eagle-ing par-fours? It would turn the course into a par-three, and real men don’t play par-three’s. This new fly-power forces us to sell it without relying on pros or pro-shops. One way is to sell it direct from our plant. That way we can keep the name printed on the ball a secret that only a buyer would know. There’s more to golf than tournaments, you know.”

The company guarantees a golfer a prompt refund if the new ball doesn’t cut five to ten strokes off his or her average score. Simply return the balls — new or used — to the address below. “No one else would dare do that,” boasted the company’s director.

If you would like an eagle or two, here’s your best chance yet. Write your name and address and “Code Name S” (the ball’s R&D name) on a piece of paper and send it along with a check (or your credit card number and expiration date) to National Golf Center (Dept. H-709), 500 S. Broad St., Meriden, CT 06450. Or phone 203-238-2712, 8-8 Eastern time. No P.O. boxes, all shipments are UPS. One dozen “S” balls cost $21.95 (plus $1.95 shipping), two to five dozen are only $19.50 each, six dozen are only $99.00. You save $43.00 ordering six. Shipping is free on two or more dozen. Specify white or Hi-Vision yellow.

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New Histories
Twenty-five years ago at the American Academy in Rome, the prize winners would groan because they had to draw a capital or two; today they like nothing better. The history of architecture has been revived, not only to help students select the best capital, but to justify its application to skyscrapers and wineries.

Nicolaus Pevsner, whose Outline of European Architecture was the only survey of Western architecture written during the heyday of Modernism, skipped over everything beforehand Romanesque, because for him, the history of architecture was "primarily a history of man shaping space." More attentive to the past, the new rash of historians have not been as sure of their standards. The author of the first of the histories to appear in the last few years, Spiro Kostof (see P/A, Sept. 1985, p. 235) espouses the faith common in the late 1960s that architecture includes the entire "built environment." Mere style has to share the text with social, economic, literary, and figurative aspects; Western architecture, with the rest of the world. Instead of the Modernists' space, structure, and function, "ritual" becomes the key to architectural value, but is left evocatively undefined. The result is a book where the space of Hagia Sophia or Chartres is barely described. Brunelleschi is lumped under the "Edges of Medievalism," and the Villa Savoye slips by in two sentences. The best parts of the book are those on cities, landscapes, and prehistory—that is to say, on the areas outside of architectural history proper.

The most radical of the new texts, by the polemical anti-Modernist David Watkin, takes the opposite tack. He prefers "to emphasize the continuous validity and vitality of the Classical language of architecture." Thus he says, "A history of Western architecture not with Mesopotamia or Egypt, but with Greece. Gothic architecture is an "experimentation." (continued on page 108)

Classical Roots
Architects well versed in Classicism consider that architecture as akin to a language, one with syntactical rules as strict and as necessary as grammar is to the writer. George Hersey's The Lost Meaning of Classical Architecture, then, is an etymological guide—both metaphorically and literally—to the language of Classicism. Hersey examines the origins of the orders and their components, looking not only at the functional and symbolic meanings of the components themselves but also at their names. Through a careful analysis of Greek language, he uncovers alternate meanings for these names (an echinos, for example, is revealed to be not only part of a Doric capital but also a neck vertebral, a wide-mouthed jar, and a seaurchin). This exploration of the subtleties of the written and spoken language yields a greater understanding of the origins of the architectural language, or at least, as Hersey points out, of the way the Greeks viewed their architecture.

One of the book's most interesting chapters reminds us that Classical ornament represents the rather gory trappings of sacrifice and of battle. The etymology of the word triglyph, he says, suggests a thighbone chopped into threes and wrapped in fat, with the guttae beneath representing drops of sacred body fluid dripping off. Whether or not this iconography was an original part of temple design, though, Hersey asserts that "the ancients ... at a certain point, saw their temples as assemblages of the materials used in sacrifice." Also, as we see in later chapters, the architects of the Renaissance, relying on Vitruvius's texts, saw and understood Classical architecture in much the same way. It is only in modern times that the "meaning" has become "lost," says Hersey, and yet the language is still in use, albeit without the wide etymological understanding this book seeks to provide.

Mark Alden Branch

PARIS 1979-1989 ed. by Sabine Fachard. Rizzoli, 1988. 192 pp., illus., $27.50 paper.
This volume looks at the current public building projects in Paris, the grands projets, shown mostly in renderings, models, and construction photos. The text includes essays by and interviews with the architects and planners of each project.

Professional Liability of Architects and Engineers by Harrison Stinson. John Wiley & Sons, 1988. 273 pp., $39.95. Originally conceived as a textbook, this book is of value to students and architects alike because of its explanation of liability, dispute resolution, and insurance. Thirty-two case studies are included.

Frank Lloyd Wright In the Realm of Ideas ed. by B. Pfeiffer and G. Nordland. So. Illinois U. Press, 1988. 208 pp., illus., $42.50 cloth, $24.95 paper.
The book version of the nationally touring exhibition (see P/A, Mar. 1988, p. 37) contains photos and drawings of Wright's work, quotes from his writings, and essays on various aspects of his career.

Great Engineers ed. by Derek Walker, St. Martin's Press, 1987. 288 pp., illus., $69.50. From the Crystal Palace to the Hongkong Bank, with railroads, tunnels, and bridges in between, this large, glossy volume pays tribute to the engineering and engineers of the 19th and 20th Centuries.

Theater Technology is packed with the fruits of Izouner's years of experience as a theater consultant. Conceived as a companion piece to John Jeff's 1977 Design Theory, this book focuses on technical problems such as lighting, flying systems, and transport devices.

Books


The Lost Meaning of Classical Architecture by George Hersey. MIT Press, 1988. 201 pp., illus., $20.00 cloth, $9.95 paper.
(continued from page 107)

radicalism is the rejection of history in favor of timeless tradition, like that of Egyptian or Chinese art; yet he is unable to face the consequences of his own ideology, which would replace history by a theology of architecture.

Marvin Trachtenberg and Isabelle Hyman have written the most orthodox of the new histories, and therefore the most successful. Theirs is "preeminent a history of monumental Hyman, and the introduction and prehistoric architecture, which are the work of both) vies with the best of Scully, Krautheimer, Summerson, Wittkower, or Pevsner in conveying information and insight charged with the love of great architecture, as in the paragraphs on the Colosseum, Hagia Sophia, Syon House, and above all, the Paris Opera. The photographs in color and black and white, many of them by Trachtenberg, are the development of a Modern style, subordinating the discourses and ideologies and the public reception which gave meaning to the forms. Gaudi is thus lumped with the German Expressionists because of their "biomorphic" forms, though they have little else in common; and monumental displays of form, such as Dudok's Town Hall in Hilversum or Saarinen's TWA terminal, are given more relax than the housing and town

The view from the top.

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Tuesday June 14 through Friday, June 17, marks the 20th anniversary of the international contract furnishings market and congress on environmental design. NEOCON '20 will open Monday night, June 13 with a Gala Celebration at the Chicago Hilton & Towers commemorating the first 20 years. Other special happenings include the opening of the Merchandise Mart’s new Third Floor, designed by Booth/Hansen & Associates, Chicago, and a pedestrian bridge by Murphy/Jahn.

Of the many events of interest to architects, several seminars will focus on current design philosophies and emerging ideas around the world. Zaha Hadid, Fumihiko Maki, Helmut Jahn, and Balkrishna Doshi will join an international panel to discuss the quality and consistency of new movements in today’s architecture. In addition, the AIA will introduce its new program to develop insights on the architectural profession in the year 2000 and beyond. Finally, the Chicago Architectural Award will be presented to: Balkrishna Doshi, New Delhi; Romaldo Giurgola, Mitchell/Giurgola Architects, Philadelphia and New York; and Fumihiko Maki, Fumihiko Maki & Associates, Tokyo.

The Fourth Annual Conference of the Institute of Business Designers, “Design Excellence: The Business of Process,” will take place Monday, June 13, at the Holiday Inn, Mart Plaza. Many design-related exhibits can be seen at Chicago’s museums and galleries. Of note is “The Modern Movement: Selections from the Permanent Collection,” presented by The Art Institute. Also, at The Graham Foundation for Advanced Study in the Fine Arts, Formica will display winning designs from their recent competition “From Table to Tablescape.” The ArchiCenter will host the traveling exhibit, “Re-making America: New Uses, Old Places.”
Seminars and Workshops

**Tuesday, June 14**

8:30 A.M. *Keynote Address*
Dr. Kenneth Blanchard, author, *The One Minute Manager*. Presented at the Chicago Theatre by *Contract* magazine and *Facilities Design and Management* magazine.

10:00 A.M. *Designer's Informium*
"Forecast for the Future in Color and Style." Janice Hall, ASID, Senior Stylist, Allied Fibers.

12:00 P.M. *Luncheon*

2:30 P.M. *Workshop*

4:30 P.M. *Workshop*

5:30 P.M. *Reception*

9:00 P.M. *Midnight Affair*
The Institute of Business Designers Midnight Affair, Chicago's Navy Pier. Contact 312/467-1950 for tickets.

**Wednesday, June 15**

8:30 A.M. *Keynote Address*

10:30 A.M. *Workshop*
"The Culture of Design: A World Perspective." Panel: Richard Linington, President, IFI, London; Jean Pinton, Chairman, IFI, Nice; Hanne Hjort, President-elect, IFI, Bergen; Grete Smedal, Treasurer, IFI, Bergen; Luis Corbella, Resources Council, IFI, Madrid; and Norman DeHaan, Professional Practice, IFI, Chicago. Moderator: Charles Gandy, FASID, President, American Society of Interior Designers, Atlanta.

2:30 P.M. *Workshop*

5:30 P.M. *Reception*
Thursday, June 16

8:30 A.M. Keynote Address

11:00 A.M. Awards Presentation
NEOCON® 20 Excellence of Showroom Design Competition and ASID/Joel Polsky Prize Presentation. Sponsored by the American Institute of Interior Designers and Interior Design magazine at The Merchandise Mart Second Floor Conference Center. Contact 212/944-9220 for tickets.

2:30 P.M. Workshop
"AIA Vision 2000 Presentation." Introduction of a new program to develop insights about the architectural profession in the year 2000 and beyond. Panel to be announced.

Friday, June 17

9:00 A.M. Keynote Address

11:30 A.M. Presentation

1:30 P.M. Presentation
Participants in the Modern Architecture Symposium present their work. Panel: Rem Koolhaas*, Office of Metropolitan Architecture, Rotterdam; Helmut Jahn, Murphy/Jahn, Chicago; and Josef-Paul Kleihues, Kleihues Architect, Berlin.

*Participation not confirmed.
Seminar Locations to be announced.
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The Centennial chair features molded, Flexonic® seats and backs. The chair may be installed in straight or curved rows or as individual seats, each with its own base.
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Arconas
Conrad Marini designed the Cuba Sofa collection with variations in seam finishes and cushion detailing to offer design options. The series includes a 43-inch-deep chair, a two- and three-seat sofa.
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Armstrong
Suffield Classic Corlon resilient sheet floor will be introduced. Offered in 10 colorways, Suffield is a 6-foot-wide, multi-color vinyl floor.
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Artemide
Antonio Citterio's Enea wall lamp may be specified in anodized aluminum or a black finish. It is constructed of anodized aluminum and resin and is 18 centimeters wide.
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Atelier International
The Cab Armchair and Two-Seat Sofa complement other models in the Cab Seating collection designed by architect Mario Bellini. Each piece offers removable, down-filled seat cushions and may be specified in black, natural, or red leather.
Circle 108 on reader service card

Allsteel
Bühk 100 Seating, designed by Peter Bühk, includes management, professional, operational, and side chair models. Fingertip controls adjust tilt and height.
Circle 101 on reader service card
Azrock
Teak, a new wood color addition to the Luxury Vinyl Tile collection, comes in four shapes, offering a selection of inlaid wood parquet patterns, border features, and contrasting strips.
Circle 109 on reader service card

B & B Italia
Antonio Citterio and Paolo Nava of Milan designed the Diesis Sofa. Upholstery options for the cushions and armrests include a range of fabrics and leathers.
Circle 110 on reader service card

Baker Executive Office
Desks, credenzas, lounge and desk seating, and tables compose the Pfister Collection, designed by Charles Pfister.
Circle 111 on reader service card

Brayton International
The Merana casegoods collection is designed for executive, middle management, and clerical office applications. The metal reveal can be specified in chrome, black, red, polished brass, or antique bronze.
Circle 114 on reader service card

Brickel
Designed by Bentley-La Rosa-Salasky, the Metal and Wood Table Group comprises sofa, end, small conference, coffee, and occasional tables with shaped hardwood edges.
Circle 115 on reader service card

Brueaton
Distinguished by a sculptured, double-tiered radius edge separated by a polished stainless steel reveal, designer Stanley Jay Friedman’s Radial Desk is available in 14 different wood choices.
Circle 116 on reader service card

Brueaton
Distinguished by a sculptured, double-tiered radius edge separated by a polished stainless steel reveal, designer Stanley Jay Friedman’s Radial Desk is available in 14 different wood choices.
Circle 116 on reader service card

Brownwig & Fils
Part of the Executive Suite collection, Lambert Chenille uses 100 percent linen pile on an all-cotton backing to create a soft herringbone design. The fabric is 55 inches wide and is offered in four colorways.
Circle 117 on reader service card

Manuel Canovas
A jacquard floral with a peony motif, Pivoines is a rayon-cotton blend and 51 inches wide. Produced in France, the design is offered in three colors.
Circle 118 on reader service card

Carnegie Fabrics
Liege and Bruges are two jacquard designs from the new Fabric Wallcoverings collection consisting of 36 patterns in 200 colorways.
Circle 119 on reader service card

Charvoz Contract
The Elke Series of reception, hospitality, conference, and stackable side seating provides several executive base style options to meet a range of applications. Elke Dauphin designed the collection.
Circle 120 on reader service card

Louis W. Bowen
Normande, a handprinted wallcovering from the Volume XXVII Collection, features a floral vine design of roses, petunias, jonquils, pansies, carnations, tulips, and geraniums.
Circle 113 on reader service card

Brayton International
The Merana casegoods collection is designed for executive, middle management, and clerical office applications. The metal reveal can be specified in chrome, black, red, polished brass, or antique bronze.
Circle 114 on reader service card

Brickel
Designed by Bentley-La Rosa-Salasky, the Metal and Wood Table Group comprises sofa, end, small conference, coffee, and occasional tables with shaped hardwood edges.
Circle 115 on reader service card

Brueaton
Distinguished by a sculptured, double-tiered radius edge separated by a polished stainless steel reveal, designer Stanley Jay Friedman’s Radial Desk is available in 14 different wood choices.
Circle 116 on reader service card

Carnegie Fabrics
Liege and Bruges are two jacquard designs from the new Fabric Wallcoverings collection consisting of 36 patterns in 200 colorways.
Circle 119 on reader service card

Charvoz Contract
The Elke Series of reception, hospitality, conference, and stackable side seating provides several executive base style options to meet a range of applications. Elke Dauphin designed the collection.
Circle 120 on reader service card

Gretchen Bellinger
A wool jacquard, Buzz Buzz™ features a stylized bee motif on a wool satin ground. The fabric expands the new Stars, B’s, and Fleur de Lis™ collection and may be custom colored.
Circle 112 on reader service card

Charvoz Contract
The Elke Series of reception, hospitality, conference, and stackable side seating provides several executive base style options to meet a range of applications. Elke Dauphin designed the collection.
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Or, your client thinks that by just putting a hot new look into a cold old building, you can transform it into a silk purse. You know better, but...

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Lario incorporates classic notions with contemporary scale and substance. Designed by Burkhard Vogtherr, Lario is the sort of disciplined design that endorses simplification. The curved line of Lario's back with its harmonious transition into the armrests creates one unified form, dynamically characterized by a distinct welt detail and uncompromising handcrafted quality. Available in a chair, two-seat, or three-seat sofa, Lario offers timeless elegance when upholstered in Brayton hand selected European leather. Lario...a contemporary classic.

1980 IBD Silver Medal Award
Dunbar
Complementing the Enloe/Summers collection of executive casegoods, the 2201 Table Desk is constructed of cherry wood and features a diamond-shaped back.
Circle 131 on reader service card

Executive Office Concepts
The Bentley Group of modular casegoods is available in a variety of wood and hardware finishes. Pedestals can be ganged side by side and specified in four depths, desks are offered in seven sizes and ten configurations.
Circle 132 on reader service card

Fixtures Furniture
Romo, a new stacking and ganging chair, is offered in upholstered, wood, and perforated steel selections. Arms, tablets, and a range of accessories complement the chair.
Circle 133 on reader service card

GF
A complete display of the Stratum Desk System including the open plan panel system, a new fabrics and finish program, metal top caps, and low-voltage electrical raceways will be featured.
Circle 135 on reader service card

Geiger International
The Jugendstil Collection reflects Viennese Modernist designs through the use of black, red, and natural mahogany wood finishes. Arabescato marbles, black granites, chrome, and brass accents may be selected.
Circle 136 on reader service card

Greeff Fabrics
Part of the Liseres and Stripes collection, Gavotte is a decorative lisere fabric with twilled satin stripes on a ground design of brocade ribbons and flowers.
Circle 137 on reader service card

Harter Contract
Introduced in 1987 and designed by Australians Edward Alexander and Peter Robinson, the Wallaby Collection offers managerial seating and a compatible guest chair.
Circle 140 on reader service card

HBF Textiles
Introduced at Designer’s Saturday and designed by Orlando Diaz-Azucay, Studio Cloth and Palladio, both 100 percent wool textiles, are offered in a choice of nine neutral colorations.
Circle 139 on reader service card

Forms + Surfaces
Barrel Vault luminous skylights are constructed of prefabricated and prefinished components that can fit net openings widths of 6’, 8’, 10’, and 12’. Custom sizes, arcs, and framing member colors may be requested.
Circle 134 on reader service card

Gunlocke
The Estro line, an addition to the Geva Collection of modular casegoods, includes worksurfaces, modesty panels, vertical storage units, pedestals, and credenzas.
Circle 138 on reader service card

Greeff Fabrics
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The Estro line, an addition to the Geva Collection of modular casegoods, includes worksurfaces, modesty panels, vertical storage units, pedestals, and credenzas.
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Hastings Tile & Il Bogno
Serie Valentina is a collection of 8" x 8" patterned and solid ceramic wall tiles from Italy.
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Some radical changes happen in a flash: Dr. Jekyll gulps a potion and turns into Mr. Hyde. Clark Kent ducks into a phone booth and Superman emerges. Cinderella tries on a shoe and lives happily ever after.

Changes in the office environment are usually not so dramatic. Alice’s office was perfect for her, but Alice doesn’t work here anymore. Shirley’s work surface is the right height for typing, but her job no longer requires typing. Tim needs another paper organizer for collating. Marketing needs a better way to display reports. Customer service wants acoustical surfaces at phoning height. The new supervisor wants a window.

The beauty of Ethospace interiors is that it lets you make those changes — the kind of changes you make most often. Panel systems let you make panel-sized changes. So does Ethospace, but there are no panels to change. The unique Ethospace frame-and-tile walls accommodate changes on your terms. (Many personal changes, like moving or replacing wall-hung tools, can be made by the user himself. Herself. Yourself.) And these changes can be made without affecting any other offices — even those on the other side of the wall. So you can give Alice, Tim, Shirley, marketing and customer service exactly what they need right now. And whatever they will need forever after. Happily.
Haworth
The Places® program of worksurface options provides new solutions for office interiors through a range of elements.

Helikon
Transitions, a modular casegoods system that offers four edge details, is available in mahogany, cherry, walnut, and select cherry veneers. The collection includes desks, wardrobes, credenzas, tables, and other office components.

ICF
Consisting of an aniline frame, offered in a black or tea stained finish, with a similar seat—available with a yellow or violet stained finish—the beechwood Trattoria chair was designed by Vico Magistretti.

Interna Designs
Featuring a sweeping curved back for structural support, Adam D. Tihany's beechwood Bice chair is produced in Italy by Trocader.

Kimball
Recessed brass drawer/door pulls and a beveled edge treatment with a horizontal veinline accent the double pedestal desks, table desks, credenzas, bookcases, and other executive elements of the 5800 Series of casegoods.

Kinetics
Designed for conference area and workstation installations, the new 400/600 pedestal table offers many color, veneer, and edge-treatment options and round or square tops.

Kirk-Brummel
Chevrons and Chichester are new coordinating patterns. Both English fabrics are 100 percent cotton and 54 inches wide.

Howe
The Concorde folding conference table folds down to 14 inches wide and 6 1/2 feet high from 4' x 4'. Rectangular tables are offered in four sizes, boat-shaped tables in two sizes.

Intrex Furniture
A collection of conference/dining, occasional, and accessory tables in a choice of ten marble and nine granite tops may be specified with contrasting support pedestals and top frames in 28 colors.
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Kittinger
The Georgian Collection mahogany desk stands on Chippendale style legs with marble faucets supporting two drawers on each side. A three-panel leather top with gold and blind tooling is optional.
Circle 152 on reader service card

Knoll International
Introduced as part of the KnollStudio Division, the Bridge Chair is designed by Sottsass Associates in Italy. The frame and legs are solid beechwood; the curved arms are constructed of bent beechwood.
Circle 153 on reader service card

Koch + Lowy
The Edipo table lamp, designed by Marco Barbaglia and Marco Colomba, utilizes a white opal diffuser. The shade and base may be specified black or white.
Circle 154 on reader service card

Kusch
The Desanto Seating System, designed in West Germany by Simon Desanto, has been expanded to include executive, managerial, conference, and guest chairs.
Circle 156 on reader service card

LUI Corporation
New "L" or "U" shaped reception desks feature soft radius edges and may be specified in several colors.
Circle 157 on reader service card

Jack Lenor Larsen
To complement the Tournament and Cabaret/Monograph groups from the Spring Collection, the fabrics in the new Summer Collection include silks and polished satins.
Circle 158 on reader service card

Lee Jofa
An all-over pattern of embossed beige dots on black decorates Arden Weave, a 100 percent woven cotton upholstery fabric. Peach, copper, celadon, and river blue colorways may be selected.
Circle 159 on reader service card

Loewenstein/Oggo
The Verona guest chair is proposed for institutional specifications.
Circle 161 on reader service card

J.M. Lynne
Beaumont III is a collection of 68 paperbacked natural wallcovering blended of linen, cotton, silk, and rayon. The series includes woven items as well as warp lays.
Circle 162 on reader service card

Lees Commercial Carpets
A color bank of 175 dyed yarns is part of a new patterned carpet program designed for heavily trafficked areas. Pile yarns are Zeftron nylon by BASF.
Circle 160 on reader service card

Koehler
The Georgian Collection mahogany desk stands on Chippendale style legs with marble faucets supporting two drawers on each side. A three-panel leather top with gold and blind tooling is optional.
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Circle No. 342
Maharam
Composition, Impression, Syncopation, and Jazz are part of Wool Reflections, a collection of six new 54-inch-wide, 100 percent wool upholstery fabrics offering a total of 104 colorways.
Circle 200 on reader service card

Marden
Also available as a tandem two-, three-, and four-seater, the Fiesta 1 seating series is offered in oak or walnut. The back and seat fabric are removable and can be replaced in the field.
Circle 201 on reader service card

Meridian
Additions to the Stockable Storage System include a range of vertical file modules. A variety of inset and outset drawer-front styles and wood or steel pulls can be selected.
Circle 202 on reader service card

Metropolitan
Brian Kane designed the Marin Chair and Loveseat for use in commercial or residential environments. Optional casters may be selected.
Circle 203 on reader service card

Mueller
A fully upholstered lounge seating group, Phil Cooper's Europe Series consists of a chair, settee, and sofa. Three choices of stitching detail are offered for each piece.
Circle 206 on reader service card

Myrtle Desk
An executive table desk in walnut solids and veneers joins the 400 Sedgefield Collection. A 48-inch diameter round table, executive service table, CRT/printer stand, and redesigned bookcases complete the introductions.
Circle 207 on reader service card

Monel
Offered in beech, ash, or oak; in natural, satin, or lacquer finishes; and in leather or fabric, the Catherine side chair is constructed of molded plywood and designed for all contract applications.
Circle 205 on reader service card

Myer

Nienkämper
Featuring a pedestal column of formed perforated steel, the Grid Column Table is offered in textured or chrome finish. The base and top are two inches thick.
Circle 209 on reader service card
Office Specialty
Radius Fronts, a new sculptural front panel option for Storage Centers and Workstore Personal Pedestals, is standard in all 45 enamel colors. Plastic laminate and wood veneers may be specified.
Circle 210 on reader service card

Panel Concepts
Created by Marta Tornera and Bruce Adams of MT Designs, Omnific operational, conference, and tech stool seating models feature articulating arms and a molded urethane construction.
Circle 213 on reader service card

PCI Tandem
The Series One Seating Collection may be custom specified with a fully upholstered arm or with an upholstered arm with low-profile inset wood detail in seven finishes.
Circle 211 on reader service card

The Pace Collection
G. Foleschini designed Summit executive chairs with a base option of casters or slides. The chair has a tubular black varnished steel frame.
Circle 212 on reader service card

Panel Concepts
Created by Marta Tornera and Bruce Adams of MT Designs, Omnific operational, conference, and tech stool seating models feature articulating arms and a molded urethane construction.
Circle 213 on reader service card

Partek Tile
Coordinated to 20 unicolored shades, Cinema Series tiles designed by Swedish architect Lena Anderson are finished with a semi-matte glaze.
Circle 214 on reader service card

Patterson, Flynn & Martin
Part of the Obsidian Collection, Bedford Squares is a contemporary design, handtufted in all wool, in black, white, and tones of gray.
Circle 215 on reader service card

Ron Rezek
The Celeste suspension lamp combines several finishes: molded wire glass sandblasted on the inside; a brushed stainless steel ring; anodized brushed aluminum canopy; and polished brass rods.
Circle 217 on reader service card

Ben Rose
Blue Chip, a 54-inch, wool and nylon blend, is introduced along with Resort, a 54-inch wide fabric that is basket woven of pure wool. Each pattern comes in 12 colorways.
Circle 218 on reader service card

R-Way
Constructed of walnut veneer, the new freestanding computer table features a gliding keyboard drawer that includes a stop-drawer front that opens for use, then closes and conceals the keyboard.
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The Wallaby Collection, conceived as an executive leather chair yet designed for fine textiles as well.

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The rich, understated, coordinated colorings and tailored small scale designs work alone or with each other.

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Saladino Furniture
The Marquis Chair consists of a foam core wrapped in feathers, all-foam arms and back, a semi-attached, channel-quilted, Dacron-filled back pad, and a feather-wrapped foam seat cushion.
Circle 221 on reader service card

Saxony Carpet
A 100 percent wool pile broadloom carpet, Foliage is available in bone and rose. The design is a stylized leaf, etched on a solid ground with a coordinating border.
Circle 222 on reader service card

Scalamandré
Inspired by the designs of Viennese artist Koloman Moser, Golden Oriole, a cotton, wool, and nylon damask, is part of the Moser collection of fabrics for wallcovering, upholstery, and drapery.
Circle 223 on reader service card

Shaw-Walker
Improvements to the Woodwind wood furniture system include metal insert options for the tables, new real wood veneers and wood finishes, and smooth transitions from surface to surface.
Circle 225 on reader service card

Shelby Williams
The Tub Style Lounge Chair features a foam-padded spring seat and padded back and sides. The seat height is 18 inches.
Circle 226 on reader service card

Spacesaver
High-density mobile filing-storage systems accommodate new or existing shelving, include mobile lateral, manuals, mechanical assist, and push-button electric powered units.
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Stark Carpet
Purvic, a 100 percent nylon cut pile imported from Italy, has an overall zigzag pattern with a sharply defined relief. A choice of 12 colorways may be selected.
Circle 228 on reader service card

RoseJohnson
Eighteen patterns representing 568 colors from the Maharam Synergism program have been added to the line of fabric options for the RJChair, introduced at Designer's Saturday.
Circle 219 on reader service card

Samsonite
A series of several padded Varix Chairs joins the current upholstered and non-upholstered Varix styles. Stacking arm and side chairs, cantilever-base arm and side, and tablet styles are now offered.
Circle 220 on reader service card

Scalamandre
Inspired by the designs of Viennese artist Koloman Moser, Golden Oriole, a cotton, wool, and nylon damask, is part of the Moser collection of fabrics for wallcovering, upholstery, and drapery.
Circle 223 on reader service card

Schumacher
A tapestry and damask woven together, Obi is 54 inches wide and 100 percent cotton. Colorations include blue, emerald, cream, coral, and garnet.
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"Forbo Linoleum comes in such a beautiful spectrum of colors, is wonderfully durable, and lets me create and implement designs as elegant as a Byzantine floor at a quarter of the cost."

Artist/designer Barbara Astman is a native of New York now living in Toronto. For a detailed case history and full color literature contact Forbo North America, today.

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SYSTEM REQUIREMENTS:
IBM PC/XT/AT or compatibles
PC or MS DOS 2.0 or higher
256K minimum memory
IBM color or enhanced graphics (or compatibles)
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The TNT Tables Designed by Cary Tamarkin • Timothy Techler

An innovative series of rectangular and square high and low tables in stainless steel, glass and wood— all offered in a variety of sizes and a choice of Brueton woods. Special sizes available.

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An Introduction

Neocon 1988

Seating By:

Michael Manwaring

Andrew Belschner

Charles Pfister

Paul Haigh

Michael Vanderbyl
"A couple months back, I was in the market for new furniture for our Customer Service Department. Fred's people needed something more than a desk. Something with more working and storage space, more privacy. Something more versatile and space-efficient. Something like a panel system.

"But my budget for the project wasn't really in the systems range. And as Fred and I discussed his requirement for an open and interactive working environment, it became clear that we were really looking for something like a panel system — without the panels.

"So when our design consultant showed me the Stratum Desk System, I knew we had a winner. Stratum's interchangeable worktops and pedestals, along with storage components and privacy screens that attach right to the worktops, gave us the versatility and space efficiency of a panel system without making us buy panels we didn't need.

"In fact, Stratum Desk gives you everything you expect from a panel system. Except the panels."

For complete information, send for the "Stratum Evaluation Package". GF Office Furniture, P.O. Box 1108, Youngstown, Ohio 44501.

Stratum Desk by GF.
When you need a panel system, but you don't need the panels.

Visit us at NEOCON 20 Space 916.
New Products and Literature

Flexible, grooved tambour in an expanded range of colors and patterns presents increased design options for flat or curved surfaces. The new line of high-pressure, decorative laminate is in addition to the traditional tambour collection, and is available in the following solid colors: bordeaux, black, almond, folkstone, nile, white, and fog. Patterned tambours include stardust, firedust, vanilla birdseye, and antique white papercraft. Natural oak and doeskin graceful oak join the existing woodgrain tambours. Formica Corporation.

Four pendant lighting fixtures expand the Les Prismatiques line. Artemis (shown), in frosted acrylic with metal arms, casts soft light upwards and diffused light below. The Radial chandelier, a bold, double-tier silhouette of frosted acrylic with brushed pewter detailing, is punctuated by radiating lines of crystal acrylic. The Helius pendant and the Vulcan round out the expanded collection. Les Prismatiques.

Edge-Finder rubber floor tile is designed to alert sight-impaired people to potentially dangerous situations, such as the edge of subway platforms. A rounded dome projects 3/16-inch above the rubber floor surface, and is easy to detect by cane or foot. Applicable to indoor and outdoor surfaces, this flooring is available in colors to match flooring systems. Also available are the new Classics Smooth Collection of solid and marbleized rubber tiles and rolls, and QL Large Rounded Squares low-profile rubber flooring in six solid colors, with custom colors available. Pirelli.

Progressive Architecture 5:88 167
The Conde House collection includes chairs and tables, for contract and residential use, designed for us by architects and designers from the East and the West.

It is a diverse collection with a common focus on fine design, craftsmanship and exceptional wood finishes.

Call your nearest Conde House representative for more information.

Circle No. 320
A central computer system monitors, records, and reports access control and alarm activity for up to 256 entrances and 1024 alarm points. The system can produce individual histories for specific cardholders, entrances, or monitor points. The hardware consists of a desktop computer with a 40 MB hard disk, a 1.2 MB floppy disk drive, and an EGA color monitor. Schlage.

The Sunline stainless steel sink, by designer Luigi Colani, has a bowl configuration that provides maximum working area in a small space. It is available with single- or double-handle faucets in a gold or chrome finish. Optional accessories include deck-controlled pop-up knob for drain release, colander tray, and teak cutting board. Franke, Inc.

Embossed doors Regal® and Regal Limited® have a textured surface with an authentic wood-grain feel. Regal's surface is factory-primed and ready to paint. Regal Limited will accept an extensive range of stains as well as paint. Both are available in a variety of styles and sizes. Weyerhaeuser Molded Doors.

Space-saving stacking chairs, constructed of solid red oak, are suitable for cafeteria, recreation, and study areas. There are more than 100 fabric selections and two wood finishes. Options include fully upholstered seats and backs, upholstered seat with oak back, or all-wood. Modu-Form, Inc.

A ceiling-mounted passive infrared detector uses a dual sensor system to screen out false alarms caused by reflected lights, drafts, and rapid temperature change. The system also avoids detection of small animals. Optex, Inc.

The DTR Series intrusion detection system uses barbed wire atop fences as both a physical barrier and an intrusion alarm sensor system. Using the taut wire principle, sensors on the wire activate the alarm when the wire is deflected. The system is adaptable to existing fences and provides virtually no false alarms. Safeguards Technology.

The Vidiscan video monitor provides three different matrix displays, allowing the simultaneous review of either four, nine, or sixteen cameras. Identifying text can be placed in the upper or lower portion of each image. The unit offers an alternative to repeated monitors or sequential camera switching. Videoplex.

The Shatterbox passive glassbreak detector responds to the sound of shattered glass while digitally filtering out other high-frequency sounds, thus preventing false alarms. The electronic microphone is capable of covering a 35-foot bank of windows, and features directional coverage for optimum signal-to-noise ratio. Sentrol, Inc.

Elevator intercoms provide communication at the touch of a button in case of mechanical failure, medical emergency, or security threat. Security personnel can also monitor the cabs on a continuous basis as a deterrent to crime in high-risk areas. The systems range from two to forty-station capacity. Talk-A-Phone.

The Cardentry Rupsass access entry card gives the user the flexibility of activating an insertion or proximity reader with a single card, eliminating the confusion that can arise from using two cards. The cards can be embossed with up to three lines of information, and can incorporate photographs, custom colors, and custom printing. Rusco Electronic Systems.

Access control card readers for use with the TechnCard line are finished mounted and suitable for tunnels, interior corridors, and other places where space is valuable. A surface-mounted model can be attached to existing walls where access control systems are being added. Both versions can be mounted in any direction so the cards are dipped, inserted upward, or inserted from the side. Frame, Inc.

The ECGM access gate controls the entry and exit of people, carts, and wheeled appliances. The gate is electrically controlled and fully motorized, is wide enough to accommodate large wheelchairs, and may be activated by a floor mat, pushbutton, or card system. Other options include variable speed control and single or dual action. Alvarado.

Touchlock keypad systems for homes or offices unlock doors using a four-digit code rather than a conventional key. The systems are operated with two-year batteries and include a sophisticated low-battery warning system. Other features include easy code change and a built-in doorbell. Paxton Automation.

Battery-powered radar intrusion detection systems offer rapid deployment and coverage of up to 328 feet per pair. The microwave sensor's tone allows personnel to determine the relative size and speed of intruding vehicles. Duration of alarm, height of detection zone, and zone sensitivity are all adjustable. Raco.

The wet look of Glaze wall tile is shown in a free color brochure featuring the ceramic shower tiles in five earthtone colors. Huntington/Pacific Ceramics.

The C30 SecuritySwitch turns lights on automatically when movement is detected inside a 75-foot radius. The coverage spans 180 degrees, making it more difficult for intruders to avoid detection. The switch can be adjusted to operate only at night or when needed, and the system itself consumes less than one watt of power. Burle Security Products.

Domed camera housings, available with brass, copper, or stainless steel finishes, can be mounted from walls, poles, or ceilings. The units hold cameras up to 12 inches long, along with a small pan/tilt or scanner. Optional heaters and blowers allow outdoor use. Videolarm.

LightAlert intelligent outdoor lighting uses infrared sensors to detect motion and turn on lights. Models are available for entryways, floodlighting, and commercial applications. The user can adjust the size of the detection area as well as the amount of time that the lights stay on after movement stops. RAB Electric.

The Home Manager home automation system alerts residents and police to any attempt to open doors or windows, and turns on designated lights when such intrusion occurs. Besides security applications, the system offers convenience features such as appliance control and room-by-room climate control. Unity Systems, Inc.

Security doors of laminated glass offer protection from forced entry and bullets without security bars or barricade screens. The door systems, commonly used in airports, banks, jewelry stores, and other secured areas, are sold complete with perimeter framing, floor closers, pivots, pull-push, locks, and cylinders, and may be ordered with electronic access lock or strike mechanisms. Falconer Glass.

Sound-retardant doors and vision lights (non-operable windows) are described in an eight-page brochure highlighting aerospace, electronic, and critical defense-related applications. Overly Manufacturing Co.
Don’t make the same worn out choice.

ECLIPSE® reflective glass from Libbey-Owens-Ford encourages individual expression.

The colors are deep and rich. The reflectivity subtle. Blue-green. Grey. Bronze. And with the reflective coating glazed first surface, a distinctive silver.

Most vision applications don’t require heat treating. Not even second surface in an insulated glass unit. So there’s no tempering distortion. ECLIPSE reflective transforms solar control glass from stumbling block to focal point.

Good-bye black-and-white solutions.

Color your vision with ECLIPSE® reflective glass.
The RAB100 decorative cutoff luminaire is an unusual outdoor fixture. The reflector/lens system uses fiber optic technology to create the effect of an outdoor chandelier, yet acrylic rods within the hinged lens enclosure are mitre cut, resulting in light bursts that appear suspended in space. Devine Design. Circle 277 on reader service card

The Diaphragm Design Manual, second edition, includes major additions and expanded, up-dated information on diaphragm strength, stiffness, connections, and filled diaphragms. The 230-page hard-cover manual is illustrated throughout. Steel Deck Institute. Circle 278 on reader service card

Masonry anchors and drills are covered in depth in a 16-page catalog that focuses on selection and specification, standards, safety factors, and spacing recommendations. The Rawplug Company. Circle 279 on reader service card

Curved curtain walls of ECLIPSE reflective glass provide aesthetically pleasing, high-tech appearance while maintaining insulating integrity. Libby-Owens-Ford Co. Circle 280 on reader service card

An electric downdraft cooktop that requires no outside venting and eliminates costly ductwork opens downdraft cooking to people living in high-rise buildings. Modern Maid Company. Circle 410 on reader service card

The All Deck acrylic coating system creates a uniform, seamless walking surface for new or damaged areas. The waterproof, textured coating can be applied to concrete, wood, asphalt, diatomaceous earth, magnesite, birdseed, masonry, metal, hot-mop, and other deck surfaces. Environmental Coating Systems, Inc. Circle 411 on reader service card

Spec-Alum column covers in solid aluminum plate have welded seams capable of withstanding high wind loads. Color finishes are highly resistant to ultra-violet light. Specialty Systems, Inc. Circle 412 on reader service card

Concrete masonry and concrete pavers are described in two brochures available at no cost. National Concrete Masonry Association. Circle 413 on reader service card (continued on page 172)
Minitondo, a low-voltage track system that uses miniature halogen spotlights, combines color rendition and beam control in a compact lighting system for store windows, showrooms, boutiques, and galleries. Targetti Sankey S.P.A. (Italy). Circle 414 on reader service card

The IRONLOCK line of indoor/outdoor unglazed ceramic tile is now available in 31X Commercial Red, featuring a metallic additive to create a textured effect. It is available in the 6" x 6" size, with matching bullnose and corner trim pieces. The line is routinely used in high traffic situations such as chain restaurants, airports, and shopping malls. Metropolitan Ceramics. Circle 415 on reader service card

Elliptical top windows are available to complement the firm’s wood windows and patio doors. Offered in wood or clad wood, the top windows eliminate frame condensation. Wenco Windows. Circle 416 on reader service card

Modified bitumen decking and waterproofing can help end deterioration due to water and salt corrosion. The modified bitumen membrane, with an elastic polyester core, resists puncture and expansion/contraction as buildings move. Rhoflex. Circle 417 on reader service card

Patio doors and French doors are new additions to the Sheer-frame line of PVC window and door systems, which includes double-hung and horizontal sliding windows, casements, bays, bows, tilt & turn windows, and custom shapes and designs. L.B. Plastics, Inc. Circle 418 on reader service card

Series SIC was designed by Eric Fullord of Browning Day Mullins Dierdorf Inc., Indianapolis, and illuminates the Lower Canal development, located between the University and the State Capitol. It includes several footbridges, lagoon, shops, residences, restaurants, offices, hotels, and landscaped esplanade.

THE NEO-ART DECO LUMINAIRE.

This new luminaire declares its aesthetic heritage boldly in its emphatic contours and sculptured linearity. Created originally for the new Lower Canal multi-use development in downtown Indianapolis, Series SIC is not only visually striking by day, it is also rugged, vandal-resistant, and extremely energy-efficient at night. Available with mating posts for single or cluster mount. Write, call, or fax for details, price, and delivery. See us in Sweet’s and LAFile

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Circle No. 368 on Reader Service Card

DURALAKE FR grain-free particleboard is designed as a substrate for wood veneers, laminates, and vinyls in walls, furniture, and fixtures where strict adherence to fire codes is critical. A companion product, DURADESIGN FR, is a laminated panel available in a variety of patterns and colors. Willamette Industries, Inc. Circle 419 on reader service card

The RETRO kitchen faucet is a new interpretation of an old favorite. It combines today’s intense colors with traditional cross handles, and is suitable for lavatory or kitchen sinks. Porcher, Inc. Circle 420 on reader service card

ResoSaver retrofit windows combine shutterproof fiberglass reinforced plastic panels and a layer of insulation for industrial buildings. A brochure describes the window system. H.H. Robertson Co. Circle 421 on reader service card

Curtain wall testing procedures, finishing standards, and related fabrication capabilities are outlined in a 12-page, full-color brochure. A companion 24-page brochure describes the company’s entrances and storefront systems. Amarlite Architectural Products. Circle 422 on reader service card
A fabric-backed vinyl wallcovering called “Venice” combines dimension. Columbus Coated the delicacy and luxury of silk a loveseat, and two sofa widths. Alades is a new seating design with flared back and arms. The collection includes an armchair, a loveseat, and two sofa widths. Kron U.S.A.

Circle 424 on reader service card

A fabric-backed vinyl wallcovering called “Venice” combines the delicacy and luxury of silk with the strength of vinyl. A pearl-coat finish adds height and dimension. Columbus Coated Fabrics, Borden, Inc.

Circle 424 on reader service card

MOVABLE WALL SYSTEMS with just five component parts are highlighted in a 12-page brochure that includes architectural drawings detailing the Forecast Series 100 and Series 200 wall systems. The Mills Company.

Circle 429 on reader service card

ENVIRONMENTAL LANDSCAPING, using natural and man-made materials, brings nature’s aesthetics into lobbies, atriums, common areas, and grounds surrounding buildings. Illustrated examples are available. Cost of Wisconsin, Inc.

Circle 430 on reader service card

**The Eagle 1760 Corporate Scanner**, a high-resolution tabletop unit, is designed for automated image capture in the corporate publishing field. The intermediate-priced C-scale scanner incorporates both raster formats and raster-to-vector conversion capabilities. ANA Tech Corporation.

Circle 431 on reader service card

A 14-foot-wide Grand Revolver revolving door allows four pedestrians to walk abreast through it. The four-wing automatic door can be set to revolve continuously at four RPM or can be activated by a microwave motion detector. It also features a push-to-activate switch to slow the door to a safer two RPM. Horton Automatics.

Circle 432 on reader service card

The Hi-Tuff RBS-100 ballast paver system is intended for use exclusively with the Hi-Tuff single-ply roofing system. Four standard and other custom color options are available on the units, which provide high-wind protection and carry a total system warranty from the manufacturer. Roofblok Limited.

Circle 435 on reader service card

**The Mill’s Company**.

Circle No. 387 on Reader Service Card

A total skylight system, designed to follow the profile of the roofline, is the first of its kind for low-profile metal buildings. The product can also be used with standard rib panels of greater roof slopes. Custom-Curb, Inc.

Circle 425 on reader service card

Personal Choices ceramic tiles and bathroom fixtures feature eight decorator motifs and eight background colors in one size, 4” x 4” x 3/4”. Summitville Tiles, Inc.

Circle 427 on reader service card

Single-ply Versigard EPDM rubber roofing systems are detailed in an 18-page booklet highlighted by color photos and installation diagrams. Goodyear Roofing Systems Division.

Circle 428 on reader service card

Paint and other protective coatings for ferrous and nonferrous metals are described in a pocket-sized, 322-page book. Applications covered range from marine anticorrosion to products used in high-temperature environments. Sigma Coatings, B.V.

Circle 434 on reader service card

(continued on page 175)
CORINDO
THE SECOND GENERATION
Marries the luster and grainning of natural granite with the economies of ceramic tile.
Durable... stain resistant... and harder than natural granite, yet every bit as vibrant and commanding.
Perhaps only Fiandre could enhance natural stone.
Available with a matte or polished finish as shown... in a combination of nine colors in 12" x 12" and a new 16" x 16" size.
Suspended plaster ceiling tiles are available in a variety of exotic faux finishes, including wood, and vivid colors. Above View, Inc.
Circle 435 on reader service card

Regal Antique faucets and fittings from England are now available in the U.S. Also offered is a floor-mounted bath and shower mixer, and a wall-mounted shower mixer. Watercolors, Inc.
Circle 436 on reader service card

Single-surface tilt tables provide ergonomic platforms for computer drafting/writing areas. The adjustable tilt-angle tables are available in 45-inch and 60-inch-wide versions, and are part of the company's Generation III line of computer support furniture. Human Factor Technologies, Inc.
Circle 437 on reader service card

Pure wool carpets for retail stores are featured in a six-page booklet that promotes wool's comfort, acoustics, texture retention, stain-resistance, ease of installation, and safety benefits. The Wool Bureau, Inc.
Circle 438 on reader service card

TrueLine oak raised-panel doors are the only such products with a certified 30-minute fire rating. TrueLine doors are offered in many species of wood and in sizes up to four feet high and eight feet wide. Jessup Door Company.
Circle 439 on reader service card

The Mega data rack, featuring hanger bars, can hold more files in less space than enclosed filing systems. The rack is engineered with an all welded tubular base and a high-pressure oak laminate top that serves as an additional work surface above the files. Mega data racks are available in three sizes. Dennison Monarch Systems.
Circle 440 on reader service card

Structural wood panels produced under APA performance standards are described in a revised 12-page product guide covering conventional plywood, composites, waferboard, oriented strand board, and structural particleboard. American Plywood Association.
Circle 441 on reader service card

Du Pont Dymetrol spring-back seating support panels are used in four innovative chair designs—Marvins, Waveform, Lazy Spiral (adjustable), and Rocker. One piece of the elastomeric monofilament woven with textile yarns replaces conventional springs, coils, clips, webbing, padding, and decking material. Du Pont Company.
Circle 442 on reader service card

Building Materials
Major materials suppliers for buildings that are featured this month as they were furnished to P/A by the architects.


When we sent our siding designers’ imaginations roaming free, the first thing in question (other than how to get our staff back) was how to duplicate the wide, beaded panels that were once all the rage in the New World.

The answer: Restoration® Chapel Hill—a 6” beaded panel that now takes its proud place in the new Restoration Collection®.

We think it’s time “ye hottest looke” in 17th-century siding had another turn—but this time in low-gloss, satin-smooth, maintenance-free, premium vinyl. And if folks want to say that’s like combining the best of then with the best of now, we won’t argue.

In fact, we’ll send literature on Chapel Hill and the whole new Restoration Collection when you call 1-800-521-9020. And it’s free. (The same price as a toll-free call in 1639.)

For additional information about any product or service featured, please circle the appropriate reader service number on the postage-free card at the back of the magazine.

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Progressive Architecture 5:88
175
AMERICA'S LARGEST CERAMIC TILE SHOW!

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Night view of Mario Botta's theater in Chambery-le-Bas.

Botta in Chambery-le-Bas
Opening the June issue will be Mario Botta's new theater in Chambery-le-Bas, France, which resolves a complicated program and difficult site conditions with considerable grace and apparent ease.

Corporate Clients
Corporations are not only major clients, but major employers of architects. A series of articles in June will look at the architects, facilities departments, and building programs of four major corporations: Disney, IBM, Prudential, and Marriott.

Also in June
A P/A Inquiry article on the design of hotel guest rooms and a P/A Technics article on curtain wall restoration will complete the feature section. The results of the Reader Poll on competitions will also be published, along with a questionnaire for a new poll on design preferences.

PCI Design Awards
Harry H. Edwards Award
The Prestressed Concrete Institute invites Architects, Engineers and Designers to submit outstanding precast/prestressed concrete structures for its 1988 Design Awards. Any type of structure in the United States or Canada using plant manufactured precast/prestressed concrete or architectural precast concrete is eligible. Winners will receive national publicity in major architectural publications.

Entrants may also wish to have their structures considered for the 1988 Harry H. Edwards Industry Advancement Award, which honors technological and design innovations in the field of precast/prestressed concrete.

The submission deadline is July 31, 1988.
For more information, contact:

The Prestressed Concrete Institute
175 West Jackson Blvd.
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Luxury Golfside Florida Homes
At Saddlebrook Resort

Now You Can Own A Luxury Saddlebrook Florida Home

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The Gulfstream V
From its angled entrance foyer to the elegant raised bath in the master suite, the Gulfstream V is one of Arthur Rutenberg's most exciting, creative designs.

* All Arthur Rutenberg designs are available at Saddlebrook.

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Harry Hopman/Saddlebrook International Tennis welcomes adults and juniors of all ability levels, from beginners to acclaimed touring professionals. The renowned Harry Hopman tennis program features year-round daily clinics, five hours of intensive instruction with never more than four players per court and instructor. The Hopman drills and teaching traditions continue as Lucy Hopman, Tommy Thompson

Harry Hopman and Howard Moore (Camp Director) head the staff of experienced Harry Hopman instructors including Roland Jaeger and Alvaro Betancur. Dr. Jack Groppel directs high-tech physical and mental conditioning. Home of the United States Professional Tennis Association and the Palmer Academy with excellent college-preparatory academics.

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If you are a talented designer with strong environmental and social concerns, consider joining us at Temple University in a brand new and unique program in landscape architecture and urban design. We are looking for energetic, creative candidates to help form the leading planners, designers, builders and managers of the 21st century environment.

Temple University, Ambler Campus, invites applications for teaching positions to begin September 1, 1988. The Campus has been created on 187 acres in a highly diverse area just north of Philadelphia. The Department has developed innovative BS programs in Landscape Architecture and Horticulture. Bachelor's degrees emphasize an ecological approach to design and management, and the close integration of Horticulture and Landscape Architecture. The position is a tenure track position at the Assistant Professor rank. The applicant should possess a Master's degree in Landscape Architecture from an accredited institution with at least 5 years professional teaching experience. Strong design and graphic skills and understanding of natural processes and the ability to communicate are the primary requirements. Areas of expertise may also include knowledge of plant materials, ecological systems, urban and suburban environments, landscape construction and history, microcomputer graphics and professional practice.

Salary is competitive and commensurate with qualifications and experience. Applicants should send a letter of application, resume, transcripts and three letters of reference to John F. Collins, Chairman, Dept. of Landscape Architecture and Horticulture, Temple University, Ambler, PA 19002. Temple University is an affirmative action, equal opportunity employer.

ARCHITECT

Ball State University
Muncie, Indiana

This individual (1) directs the completion of assigned design projects from client contact and design development through complete construction drawings (and specifications if needed) and (2) coordinates activities of design team for in-house projects. These projects encompass all necessary architectural design, interior design and structural aspects of the development and remodeling of university facilities. Minimum qualifications: Bachelors degree in Architecture or related field; at least 2-3 years experience with a professional architectural/engineering or related design firm; knowledge of architectural design, structural, mechanical and electrical principles, state building codes, and OSHA regulations; ability to complete professional quality construction drawings and specifications, develop project budget, project management and contract administration. Preferred Qualifications: Architectural registration in the state of Indiana; supervisory experience with a design group. Review of applications will begin immediately and continue until position is filled. Send resume, three (3) original letters of reference and official transcripts for Dr. Norman Beck, Human Resources Department, Ball State University, Muncie, IN 47306.

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The windows in the façade of the United Gulf Bank by Skidmore, Owings & Merrill (pages 65–73) offer an innovative solution to the common problems of glare, heat gain, and large lighting loads in office buildings. Key to the design is the light shelf, which shades the recessed view window and reflects daylight onto the coved ceiling and thus deeper into the perimeter offices. The translucent glass at the outer edge of the light shelf diffuses the daylight, while the reflective glass in the view window aids in reducing the amount of solar heat gain. Vertical glass fins, oriented north and south—regardless of window orientation—and pulled away from the windows to prevent heat transfer, also shade the recessed windows from Bahrain’s intense low sun without significantly interrupting the view. Offering some additional shade are the precast concrete piers, which are oriented in the same direction as the fins.

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