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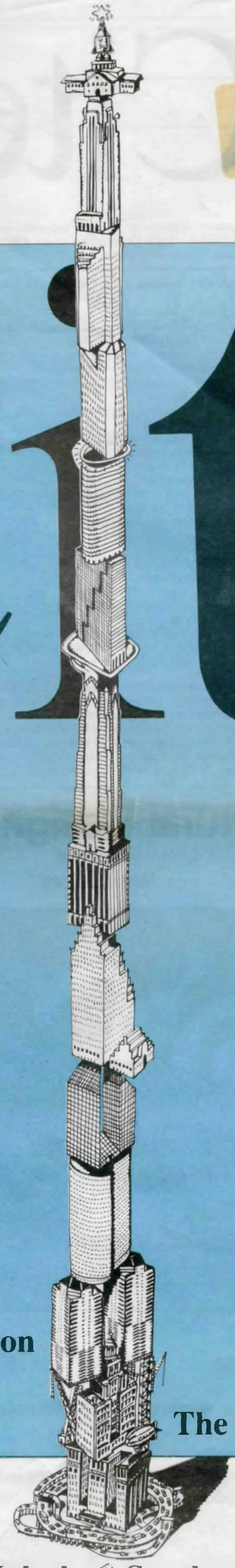

The Skyscraper in Houston

The Impact of Tall Building

Helmut Jahn's Southwest Center

InCite

Cite

Coming in the Fall Issue:
Houston Architecture in the '50s

Cover illustration by Edward Fella

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INDIANA COURT

TOWNHOUSE DEVELOPMENT

A contemporary lifestyle can be yours in these traditional Georgian townhouses, within walking distance of some of Houston's finest shops and restaurants. The living areas with high ceilings are spacious and elegant. Among the amenities are security systems, double garages, hardwood floors, marble entrances, stone lintels, formal dining rooms, separate breakfast areas, fireplaces, distinctive master suites, two bedrooms, two and one half baths, fine cabinetry, decks, courtyards and french doors...

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Big Cité Beat

Bissonnet Village, under construction, M. Nasr and Partners, architects (photo by Paul Hester)

Center Four, 1983, Basil Narun Interests, architects (Photo by Paul Hester)

Magic Island, under construction, Michael von Furstenburg, architect; ex-Wilson's Furniture Showroom, 1971, Wilson, Morris, Crain and Anderson, architects (Photo by Paul Hester)

☛ King Tut's eternal gaze now watches over the Southwest Freeway and even the most humble strip shopping centers sprout giant keystones and Baroque broken pediments. Two projects nearing completion — **Magic Island** and **Bissonnet Village** — and another finished last summer — **Center Four** — demonstrate the vitality of the postmodern mode in Houston. Michael Graves may be on **W**'s "out" list for 1984, but in Houston the mail always has been slow in arriving.

☛ Among the works commissioned for this year's Houston Festival was a short story by writer **Donald Barthelme** (son of architect **Donald Barthelme**) on the subject of moving back to Houston from Manhattan. Called "Return," Barthelme's tale blithely mixed Philip Johnson with the Azalea Trail, the Galleria, and "acres and acres" of Totally Nude Live Girls on South Main. Another commissioned work, poet **Lorenzo Thomas**'s five-part "Liquid City," also took an architectural perspective on Houston: the "City of glass, a place of material dreams . . . A town where high school children on the bus/ Discourse on architecture . . . The 1960s realized at last." One of the festival's concluding events was a SUMfest-sponsored public lecture by **Aldo Rossi** at the University of Houston.

☛ **A building with a difference:** A local bank recently published a brochure that included the following under the subtitle "The Ability to Meet and Handle Situations." "ResourceBank offers some creative ways to handle the challenges of today's financial environment. Of course your deposits are insured by the FDIC up to $100,000. But to further guarantee the personal security of ResourceBank, we have arranged a unique and highly effective security force. Members of the Sikh religion, a Hindu sect founded in the 16th century who are trained in the martial arts and widely respected for their dedication to duty, establish an atmosphere of safety that pervades the building. Their presence, and the ample number of safe deposit boxes available to secure your valuables, make ResourceBank the safest place to be."

☛ **Flood control, Texas style:** While Houston has its flood-prone bayous, and San Antonio its RiverWalk, Lubbock has only parched West Texas prairie. This dry situation, however, may soon change as this latter city seeks to emulate its more water-logged Texas cousins. According to recent reports, Lubbock has ordered a river. Making use of irrigation water that has already been once recycled from sewage-treatment plants, this city plans to fill up run-off lakes and release the overflow into the Yellow House Canyon, a big ditch that runs through the town. Taking advantage of this idea, couldn't Houston solve one of its problems, too? Why not use our technological know-how and build a pipeline direct from Brays Bayou to the Yellow House Canyon, thereby making what is dry, wet, and what is now wet, dry?

☛ Last fall the **University of Houston College of Architecture** cleaned out studio space located on the ground floor of Building Z (1955, Cato, Austin, and Evans Architects, Edmund Furley, associate), washed off the plate-glass windows and set up an exhibition space, **The Furley Gallery.** The Gallery's name honors both the Furley family and Edmund Furley, long-time associate dean and professor emeritus of the College. Shows held during the past academic year included an exhibition of drawings by Richard Ferrier, University of Texas at Arlington College of Architecture professor, and recent works of the Houston office of Skidmore, Owings and Merrill. The most provocative exhibits, however, have been those which display student work done at the College of Architecture. Many of the exhibits increased the viewer's understanding of what architecture looks like and how it is defined. While those with conservative architectural tastes may find much of this work at best puzzling and at worst meaningless, the high standards of draftsmanship, craft, and evident originality validates the student production in and of itself. The future may be presaged by the present at The Furley Gallery. For more information on exhibit schedules and gallery hours, contact the University of Houston College of Architecture, (713) 749-1187.

(left) and proposed new building (center). (San Antonio Art Institute)

Citelines

Texpresso: Houston/Dallas Bullet Trains

After a generation of neglect, and 15 years of rail-corridor improvement in the Northeastern United States, interest in reviving intercity rail transport is on the rise across America. Serious proposals for bullet trains incorporating the latest European or Japanese technology have been made in Florida (Miami to Orlando then Tampa), Pennsylvania (Philadelphia to Pittsburgh and the Midwest), and California (Los Angeles to San Diego). In Texas, too, passenger trains may once again roll along the legs of the triangle delineated by Houston, Dallas, and San Antonio.

The Texas Railroad Transportation Company (TRTC), based in Austin and chaired by Viscount Paul de Rosière, a relocated French entrepreneur, plans to build a 750-mile, four-billion dollar bullet-train system connecting these cities along existing rail rights-of-way. For the moment, however, the TRTC is concentrating just on the Houston-to-Dallas run.

While much work needs to be done before even this initial route is any more than a gleam in the eyes of the backers, one hurdle to the aquisition of rights-of-way was recently overcome. Federal Bankruptcy Court Judge Frank J. McGarr approved a plan granting the TRTC one more year to complete feasibility studies and raise capital needed to purchase a Houston-Dallas right-of-way from the Rock Island Railroad. One half of the interest in this 100-foot wide strip of land extending between the two cities is additionally controlled by the Burlington Northern Railroad. TRTC spokesman Tom Wagner said, however, that his company had already arrived at a mutually equitable means of sharing this property with Burlington Northern. With a $250,000 escrow payment to Rock Island Trustee William M. Gibbons, the court agreement gives the TRTC until 31 December 1984 to raise the $17.5 million necessary to close the sale.

If secured by this date the TRTC will control the right-of-way from Houston to Waxahachie. The final 20-mile sprint from this latter town to Dallas has been secured with an agreement from the Katy Railroad. Station locations and equipment choices have not yet been considered.

The biggest question that faces the owners of the proposed system is of course whether or not there will be sufficient ridership to justify the expected initial capital outlay of $1.5 billion. To answer this question the TRTC hired Parsons, Brinckerhoff, Quade and Douglas, a New Orleans consulting firm, to do preliminary market feasibility and ridership studies. Their investigation indicates that at $40 per ticket for a one-way trip, there would be sufficient use of the rail system to guarantee profitability.

Meanwhile the Texas Railroad Commission has also applied to the Federal Railroad Administration for a grant to do a formal feasibility study of the rail triangle. Efforts have also been made within the Texas Legislature to fund feasibility studies to test the viability of rail passenger transport. These efforts, not connected to the plans of the TRTC, include a bill sponsored by Houston Representative Al Edwards. His bill would increase the Texas driver's license fee by 25 cents to finance the costs of a study. The bill, approved by the Texas House of Representatives in May of 1983, awaits action by the full Legislature.

Current plans, perhaps optimistic, call for the first trains to depart Houston sometime in 1988. Just imagine leaving your downtown office or home, walking to the Texpresso station, and riding at speeds in excess of 180 mph. Avoid the freeways, avoid the airports, and avoid the airplanes. Travel to downtown Dallas in under two hours — by train.

Randolph Jackson

Preservation Alliance Sponsors Design Competition

The Greater Houston Preservation Alliance is sponsoring a design competition for the Main Street-Market Square Historic District in downtown Houston. The competition aims to promote a greater sense of coherence within the district by proposing strategies for the treatment of vacant sites and parking lots; street, sidewalk, and public-space improvements; and connections to Buffalo Bayou and Allen's Landing. The submission deadline is 1 June 1984. Cash prizes for the first and second place entries will be awarded by a jury composed of preservationists Barrie Scardino and Truett Latimer, architects William F. Stern and Barry Moore, and Houston City Planner Efraím García. For registration information, call the alliance's office at the Harris County Heritage Society, (713) 223-8367.

GREAT FROM AFAR, FAR FROM GREAT

Helmut Jahn's Southwest Center

John Kaliski

In the spring of 1982 Southwest Bancshares, Inc. and Century Development provided three architectural firms, Kohn Pederson Fox Associates of New York, Murphy/Jahn of Chicago, and Skidmore, Owings and Merrill of Houston, with a straightforward agenda for a skyscraper competition:

". . . design a timeless building of an institutional nature which would symbolize Houston's growth, strength and success and . . . provide an architectural design which would have a lasting impact not only upon Houston's own skyline, but also upon the consciousness of national and international corporate leaders, business people and visitors."[1]

The flurry of national publicity that surrounded the unveiling of Murphy/Jahn's winning design in October 1982 certainly brought to the developers desireable recognition. Articles in major Texas newspapers, *The New York Times*, *Time*, *Newsweek*, and the national architectural press attest to this fact. The tower, by sheer size alone, will make its mark on the Houston skyline. But whether the building will symbolize Houston's growth and success, or be seen as an icon of a past era of prosperity, is an issue that cannot be presently resolved.

Murphy/Jahn's Southwest Center is the newest in a line of ever taller buildings that chronicle the rapid accumulation of wealth by powerful Houston individuals, industries, and financial institutions. The Southwest Center's projected 1,395-foot height reflects the forces of speculative real estate economics, which demand huge buildings on small sites in order to profit from valuable downtown square-footage. There is, however, an older force at work here: the desire for institutional recognition translated into a symbolic quest for height — power. This quest is as ancient as the biblical legend of the unfinishable Tower of Babel.

This newest addition to the skyline will tower over its neighbors — declaring its supremacy — its only rival in terms of visual dominance the five-mile distant, 64-story, 901-foot-high Transco Tower (1983, Johnson/Burgee Architects and Morris*Aubry Architects, architects). Sited one block east of the impressive wall of buildings along Smith Street that overlooks the Civic Center, the Southwest Center will emerge from a nest of structures, many of which once reigned supreme as this building seems destined to do.

Northeast of the new tower's site stands the 32-story Niels Esperson Building (John Eberson, architect). The 1927 skyscraper, with its loveable cupola, was built by Mellie Esperson as a memorial to her dead husband. To the south of the proposed tower rises the 33-story, 500-foot aluminum-and-glass Tenneco Building (1963, Skidmore, Owings and Merrill, architects), whose bulk overpowered the Houston skyline in the 1960s. To the west of Jahn's design is One Shell Plaza (1971, Skidmore, Owings and Merrill and Wilson, Morris, Crain and Anderson, architects), once the tallest reinforced concrete, framed-tube building in the world. Finally, southwest of Jahn's tower, the 71-story, 970-foot green reflective-glass Allied Bank Plaza (1983, Skidmore, Owings and Merrill and Lloyd Jones Brewer and Associates, architects) shares with the 75-story, 1,007-foot-high Texas Commerce Tower (1982, I.M. Pei and Partners and 3D/International, architects) to the north current honors as Tallest in Texas.

All of these structures, now a collective focus of visual attention, will create an active yet ultimately neutral backdrop for the Southwest tower. A new center of attention will be created. From a distance the Houston skyline will regain that particular visual excitement lost when the split of Pennzoil Place (1976, Johnson/Burgee Architects and S.I. Morris Associates, architects) was obscured by new construction. The proliferation of mostly flat-topped, generally abstract, and often anonymous towers that now dominate the city will have a new focus. Downtown Houston (Johnson/Burgee's 56-story, 777-foot-high RepublicBank Center notwithstanding) will no longer look like downtown Dallas.

Traditionally, buildings in downtown Houston have respected the grid of streets laid out in 1836 by the Allen brothers. To the founders of Houston the grid represented an expedient, efficient system of dividing land for sale and resale. In recent times, as Houston's buildings became bigger, the distinct sense of rows of scaleless blocks, all marching in order, began to predominate. This phenomenon is especially marked along Smith Street between Capitol and Dallas, near the Southwest Center site, where each high-rise stands squarely on its individual block, projecting the rationalized and consumptive order of the grid onto the skyline.

The Southwest Center draws attention to itself by opposing this traditional order with its 45° rotation to the ruling grid. Such lack of respect for an existing condition works because the tower occupies the entire block. The building is intended to be read as a special object in an otherwise undifferentiated orthogonal field.

The rotation of the tower will be most effective from the distance and speed of the highway. Circling Houston's downtown on the expressways presents the car-bound viewer with a sculptural composition that is infinitely in movement with the ever-changing rush of the automobile. The 45° disposition of the Southwest Center will further activate that sense of movement which lies at the root of the often-noted dynamism of Houston's skyline. From the distant vantage point — from the freeway — the overall placement of the tower mass and its relation to the downtown context will appear provoking yet unforced. The Southwest Center, given the aspirations of the program, is correct for this skyline.

Helmut Jahn, the 43-year-old president and chief of design of Murphy/Jahn, has willfully shaped the slender, rotated mass of the structure into an obelisk that is set back in five-foot increments every 15 stories. The top of the building is gabled and formed into four giant, pointed dormers which come together to form the base of a 120-foot aluminum spire. The gabled motif at the top of the building recurs at the base in four 100-foot-high entrance porches that project outward from the rotated shaft. A curtain-wall of reflective glass and narrowly spaced aluminum mullions is centered above each of the entrance porches and rises 82 stories to the upper gables. In compositional counterpoint to this sheer vertical ascent are the edges of the shaft, reinforced with horizontal bands of flush granite and tiers of recessed strip windows. The striped effect evokes from afar a reduction and transformation of a similar motif that occurs on William Van Alen's Chrysler Building in New York of 1930. The base of the Southwest Center will also be horizontally striped with different colors of granite. There the stripes will be approximately the height of a man. At the entrance porches, the stripes will lose their flush-jointed finish and suggest giant three-dimensional rustication.

Jahn has written that "the design of the Southwest Center represents an effort to create an 'Historical Continuum,' juxtaposing the spirit and richness of past forms and present-day techniques and materials."[2] "Obelisk," "rustication," "gable," "spire," "Chrysler Building": these are words that evoke the history of architectural images as well as the current retreat from the reductive modernist aesthetic of the 1950s and 1960s. With its multiple sources of inspiration, Jahn's Southwest Center breaks the narrow compositional formalism that has informed many of Houston's recent skyscrapers. Even the eclecticism of Philip Johnson's Transco Tower and RepublicBank Center is not as fevered as the multi-material, multi-layered, and collaged imagery of Jahn's tower.

Southwest Center, The Houston Competition

Edited by Peter Arnell and Ted Bickford; essays by William Pederson, Richard Keating, and Helmut Jahn, review by Paul Goldberger, New York: Rizzoli International Publications, 1983, 119 pp., 230 illus., $14.95

Reviewed by Stephen Fox

To document the three schemes submitted in 1982 by Kohn Pedersen Fox Associates, Skidmore, Owings and Merrill, and Murphy/Jahn for the Southwest Center office tower (see "Great From Afar, Far From Great", p.), two enterprising young New York graphic designers, Peter Arnell and Ted Bickford, have issued the second in their projected series of monographs on recent architectural competitions. *Southwest Center, The Houston Competition* is a slight but elegant book. Arnell and Bickford have appropriated Massimo Vignelli's *Oppositions* look, reduced the format slightly, and added color to produce a sumptuous "little" document that exudes preciousness and luxe.

The disturbing element in this suave production is the pretentiousness that emanates from its multiple texts. The prose style of the introductory chapters is inane, a sort of public-relations blurb-ese that is the more disconcerting for its elegant graphic context. In the essays with which each of the three designers, William Pedersen, Richard Keating, and Helmut Jahn, prefaced the illustrations of his firm's project, this tendency surfaces in a more subtle and involuntary form, in a divergence beween expressed intentions and architectural results. For instance, the notions of contextual fit and urbanistic responsibility are reiterated, but none of the designs grows out of an analysis of the site and its surroundings, and none acknowledges architecturally the presence of the existing Bank of the Southwest Building. (Ironically, this rather dumpy '50s skyscraper incorporates all the responsible urbanistic attributes for which the three architects profess such reverence.) A concern for the discipline of typology is another recurring theme. But as the exemplar of the urbane skyscrapers of the 1920s, the Chrysler Building is consistently cited, a building that was dismissed as gauche, frivolous, and vulgar when completed in 1930. Neither in obeisance to the oft-invoked *genius loci* nor in a discriminating awareness of architectural history (as opposed to the popular mythology of the present) do the architects' texts persuade when compared to their designs.

Paul Goldberger, in the book's concluding essay, obliquely acknowledges these problems in his critique of the two

Perspective view of base (Drawing by J. Smith, Murphy/Jahn)

Southwest Center, 1982, Murphy/Jahn and Lloyd Jones Brewer and Associates, architects, model (Murphy/Jahn)

To question the use of imagery in a building which through size alone makes an impact on its environment is perhaps meaningless in an era where fickle fashion rules. Nevertheless, the lack of semantic rigor as evidenced by the skin of the Southwest Center raises serious issues with regard to urban place-making which cannot be begged off. While one cannot deny the importance of the Chrysler Building in the mythology of the American skyscraper, what is its symbolic relevance, beyond personal design whim, to an oil-patch bank-scraper of the 1980s?

The Chrysler Building was a corporate set piece that addressed through a rigorous ornamental program Walter P. Chrysler's marketing needs. This *Art Déco* skyscraper projected a jazzy image, complete with hood-ornament gargoyles and hub-cap entablatures made of molded brick. The racy styling was a metaphor for the romance and imagery of the automobiles that Chrysler hoped to sell to the American public. While this ornamental program has inevitably become historical in terms of promotional relevance, its insistent suggestion in every detail made the Chrysler Building a rich document that still can move the imagination of those who experience it, much the way a figuratively-ornamented church, library, or train station does. One must ask whether the consumption and reduction of this particular architectural image (or any of the others mentioned) for a skyscraper in Houston does not impoverish the latter's content, rendering it fashionable, yet unintelligible.

The Southwest Center will be bigger than the sum of its parts. Yet a critical analysis of these parts raises questions about the efficacy of an imagery detached from the institutional and historical context that it ostensibly is serving. Ultimately, the tower's obelisk shape, its orientation, and its size overwhelm these questions; monumentality is achieved in spite of the irresolute nature of the building's skin.

During the 1970s Murphy/Jahn became well-known for buildings that manneristically expressed their structural and mechanical components, a tendency recently defined as "romantic high-tech."[1] While the structural system of the Southwest Center (designed by LeMessurier Associates/SCI of Cambridge, Massachusetts with Walter P. Moore and Associates) is advanced, the exaggeration of the pragmatic parts of the structure has been cast aside for a new emphasis on image-making.

Beneath the aluminum, granite, and glass skin of the Southwest Center lies a structural system that departs from the technique of framed-tube construction employed in high-rise buildings here and elsewhere in the United States during the last 15 years.[4] The first skyscrapers built in this country relied on a jungle-gym of steel for support. With refinements this technique continued to be used until the 1960s when engineers found that by moving more of the structure to the outside edge of the building they could achieve significant savings in material while increasing the building's ability to resist wind forces. This stiffened tube, analogous to the cardboard tube of a paper towel roll, became the almost-exclusive means of supporting very tall buildings in the 1970s. Recently, engineers have begun to carve away this tube to make, in effect, giant vertical trusses. The structure of the Southwest Center utilizes this new method with a system of both steel and reinforced concrete. It is akin to a giant trussed bridge turned on its end.

At each corner of the Southwest Center are a pair of reinforced-concrete "super columns" that diminish in section from 10 feet by 15 feet at the bottom of the building to 5 feet by 5 feet at the top. These columns, which carry nearly all of the loads associated with each floor and the wind, are stabilized with repeating nine-story diagonals tying the paired super columns together. The placement of these super columns is notated on the skin of the building by the stone edges of the vertical glass zone. Besides this one gesture there is no other manifestation of engineering on the exterior of the building.

The engineering techniques incorporated in the design of the Southwest Center allow for column-free leasable office space. The offices inside will additionally benefit from the 45° rotation of the building. Offices that directly face their high-rise neighbors typically suffer from limited views extending only across the street to the next curtain-wall. Turning the Southwest Center on its block will guarantee good views at lower levels past the surrounding buildings to the landscape beyond. Lessees of the upper stories of the building will, of course, have unimpeded vistas from their windows. The 79th floor of this tower has been designated as a public observation level where, on clear days, one should be able to see the Gulf of Mexico.

If the office environment and the views from within the Southwest Center promise to be less claustrophobic than

Project: Southwest Center, 1982, Skidmore, Owings and Merrill, architects, model (Skidmore, Owings and Merrill)

The Runners-Up

Century Development and Southwest Bancshares interviewed over 30 architects before inviting three firms — Murphy/Jahn, Skidmore, Owings and Merrill, and Kohn Pederson Fox Associates — to submit proposals in competition for the design of Southwest Bancshare's skyscraper headquarters in March 1982. Murphy/Jahn won the competition, but the sponsors made the other two entries public at the same time that they announced the Southwest Center in October 1982.

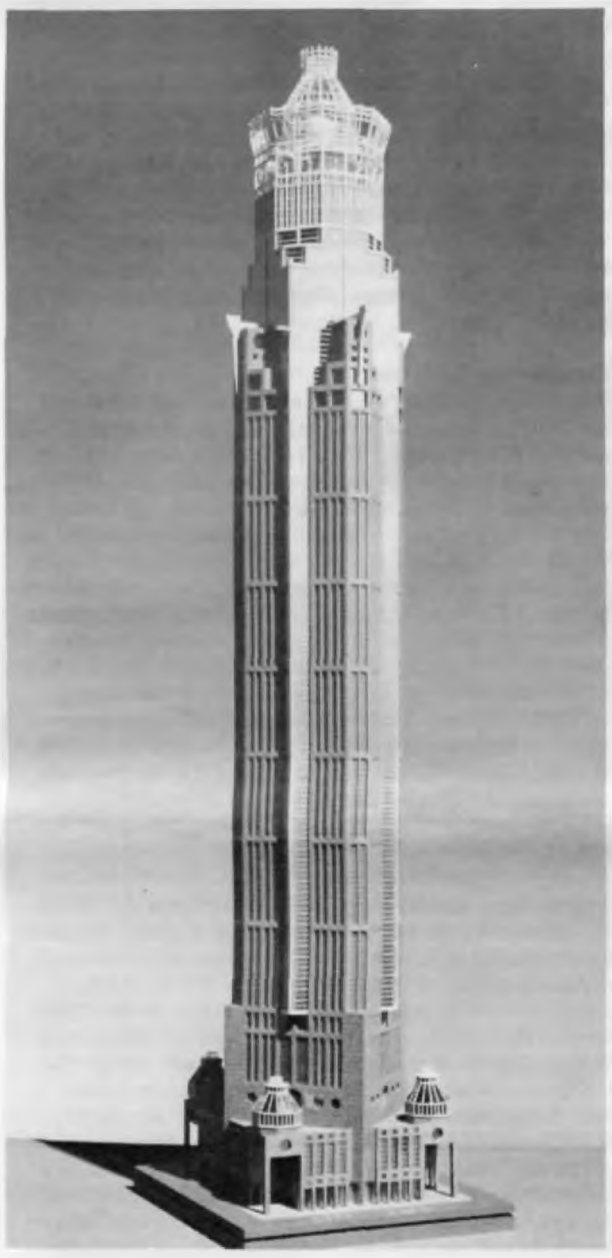
Skidmore, Owings and Merrill proposed a square-planned, 80-story, 2.35 million square-foot shaft to rise 1,370 feet. The imageability for which the clients called was derived from SOM partners Richard Keating and Fazlur Khan's use of Khan's version of the "super-column." This logically developed the implications of Bruce Graham and Fazlur Khan's design for One Shell Plaza, concentrating structure at the four corners of the building. By locating four separate elevator cores within these reinforced corners, it became possible to create a monumental, 110-foot high, open-air space beneath the tower and to treat the top of the building as a "crystalline dome held on four sides like a diamond solitaire," as SOM described the five-level, airborne restaurant and observation deck structure. Practically, it made three separate entries possible, appealing to the corporate egos of three potential major tenants. Differentiations in the window pattern and the color of the granite-clad curtain-wall articulated the structural idea of the building. Beneath the monumental loggia lay a

runners-up, the Kohn Pedersen Fox and SOM schemes. He praises Murphy/Jahn's winning design for its compositional refinement and its neat integration of referential imagery with contemporary techniques and materials. Tactfully, Goldberger refrains from implying that any other architect might have done a better job. Works by Philip Johnson, Michael Graves, and Cesar Pelli are mentioned but not directly contrasted with any of the three submissions for adroit use of *Art Deco* imagery, brilliant displays of spatially configurated planning, or the development of an architectural code that fluently articulates current ways and means of tall building.

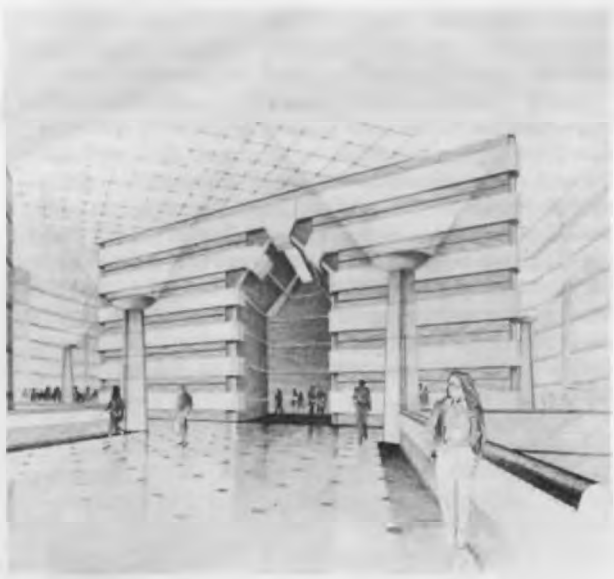
Although the most successful new tall buildings in downtown Houston do not attempt as much as the architects of the Southwest Center sought to achieve in their designs, these buildings do embody some important characteristics in which the Southwest Center schemes appear deficient. For example, the First City Tower (1981, Morris*Aubry Architects, architects) is shaped to define outdoor spaces that respond to the presence of surrounding tall buildings. Combined with an open, elevator lobby that, while only an elevator lobby, is nonetheless a beautiful urban room, and a lyrically choreographed arrangement of outdoor sculpture, this gesture results in the creation of a special place that invites public occupation. Across the street, the 1010 Lamar Building (1981, Nasr, Penton and Associates and Klein/Falick Partnership, architects) contains an array of internal public circulation, exhibition, restaurant, and shop spaces ingeniously composed in section to provide a sense of variety and richness on a constricted site where open plazas were not feasible. Without resorting to imagery excess, the architects of these two buildings used the factors of site, surroundings, and certain notions about public space to make tall buildings that architecturally contributed to the city rather than exploiting it as a mere backdrop.

The three Southwest Center entries fall short of the terms that their architects set for themselves. Each has something to recommend it. Kohn Pedersen Fox's design is the most rigorously derived. Skidmore, Owings and Merrill's features the most innovative programmatic interpretation and the best public space. Murphy/Jahn's emerges as the most ingratiating, simply because it appears to fulfill the criteria for achieving contemporary landmarks that Jahn adduces in his essay: buildings that "act as a theatre for a futuristic world-of-tomorrow ambience, [that] create excitement, surprise, and are intended to be people-pleasing." Yet all three remain fixated objects rather than urban fragments.

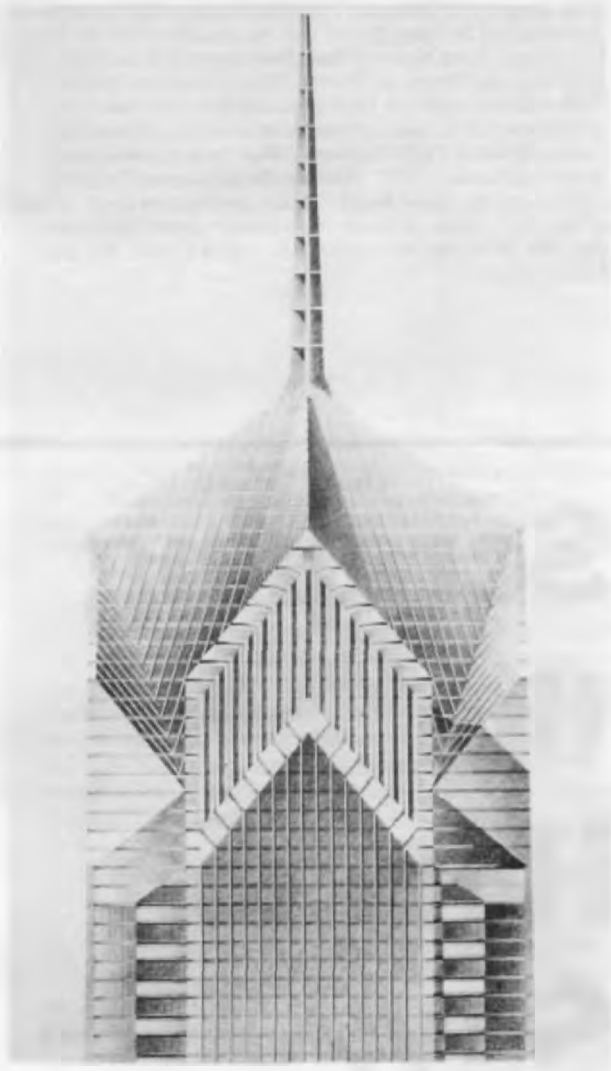
Southwest Center, The Houston Competition does not dwell on this collective shortcoming. Arnell and Bickford's book is celebratory, not critical. As such it is a handsome artifact.



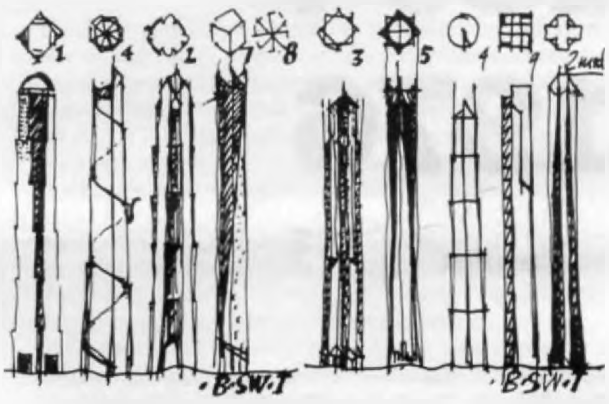
Project: Southwest Center, 1982, Kohn Pedersen Fox Associates, architects, model (Kohn Pederson Fox Associates)



Perspective view of entrance lobby (Drawing by J. Smith, Murphy/Jahn)



Detail, elevation of summit (Murphy/Jahn)



Conceptual sketches by Helmut Jahn (Murphy/Jahn)

tunnel-level concourse, accessible directly from the street, and two levels of parking.

Kohn Pederson Fox Associates' William Pederson and Sudhir Jambhekar, in association with LeMessurier Associates/SCI, proposed a 94-story, 2 million square-foot tower. Like SOM, Kohn Pederson Fox used the tower's structural system to generate its complex form; the architecture literally rose out of the structure. A cruciform envelope of closely-spaced concrete piers, turned on the diagonal and faced externally with granite, was penetrated by thin, projecting slices of green glass. Above the 73rd floor, these slices emerged to form a square-planned, glazed shaft crowned by an octagonal superstructure of white-painted steel containing the restaurant and observation deck. At the street level, monumentally scaled, five-story loggias capped with steel and glass lanterns were stationed at the four corners of the block to provide access to the lobby and the central elevator core. Flanking each of the loggias and opening both to the street and the lobby were spaces designated for retail use. A covered passage was to surround the perimeter of the building. Beneath grade lay a tunnel-level concourse (not open to the street as in the Murphy/Jahn and SOM proposals) and two levels of parking.

Southwest Bancshare's impending merger with the Dallas-based Mercantile Texas Corporation brings yet another tower into the picture. For Mercantile is planning to move up from the 33-story Mercantile National Bank Building of 1942 (W.W. Ahlschlager, architect), the tallest building in Texas from 1942 until 1963, to a 60-story building, presently in design, by Johnson/Burgee Architects of New York.

those in typical downtown office structures, the manner in which the building is integrated with the street and tunnel system suggests that Houstonians will experience merely an exaggerated version of what already exists. Entrances to the Southwest Center will occur under the giant 100-foot high porticoes, stationed prominently at the street corners, signifying their importance for blocks in every direction. Given the size and inherent monumentality of these porches, one is led to expect a significant public space within the building. Instead, present drawings suggest an anticlimactic and empty entrance lobby at the street level occupied only by the elevator core and escalators to the tunnel network below. The lobby of this obelisk-shaped tower will thus be little different from the lesser lobbies of the speculative office structures that make up most of downtown Houston.

The user of this building, the largest building in downtown Houston, visible for miles around, confronts in the lobby a series of light wells, regulated by the geometry of the building, that open to the tunnel level below. If the intention underlying the design of these wells was to invite passersby to come in from the street and descend, their 25-foot distance from the sidewalk renders the shafts gratuitous. There is little looking-up to the street from below, and very little looking-down. The opportunity to bring the tunnel activity up to the level of the street and into the building is lost. The possibility of celebrating the arrival of visitors intent on a view from the observatory is diminished by the corporate sobriety that informs the public space. A building as prominent as the Southwest Bancshares tower could have at least a wonderful banking hall with a clear and direct relation to the street. Unfortunately, banking, shopping, eating, watching — in short, the activities that bring life to the public spaces of a city — are relegated to the basement in this building. People should expect more than a quick elevator ride up to an observatory or an escalator ride down to an orderly and sanitized mole's nest.

Once one recognizes that the economic forces that shaped this building are not dissimilar to the forces of corporate form-making that spawned its high-rise neighbors, one is not surprised at the experiential similarity. Any quality that this proposed tower has results simply from the amplification of these forces. Any fault that can be discerned reminds the viewer of the faults of many other downtown buildings. The Southwest Center is more of the same, only bigger and more stylistically current. The tower strengthens the picturesque quality of the Houston skyline. The offices within promise to have spectacular views. At the level of the pedestrian, however, nothing substantially new is offered. Given the visual gesturing and the magnitude of the undertaking, too many opportunities for positive urban place-making are being missed.

In his oft-quoted essay on the Eiffel Tower, Roland Barthes evoked the emptiness of this monument as one of its most powerful attributes. For Barthes there was only one use for the Eiffel Tower: it functioned as a symbol of Paris and France for the world. Precisely because the Eiffel Tower is empty, yet always present, "it means everything."[5] The Houston skyline, though suffering from current economic conditions, is inhabited. Yet from the freeway, from the detached environment of the car, its emptiness is virtual. The Southwest Center will provide to this sensed emptiness a powerful center, a monumental focus for masses in movement, a point of reference for the confused. Houston's skyline, not its downtown, will continue to mature.

Postscript

Groundbreaking for the Southwest Center, originally scheduled for the fall of 1983, has been postponed until late 1984. As of this writing, the Federal Aviation Administration has refused to readjust its 1,049-foot height ceiling on construction in downtown Houston. The Southwest Center would rise about 390 feet above that level. Because this ceiling is not enforced by the City of Houston, Southwest Bancshares and Century Development can disregard it. Working with Murphy/Jahn as associated architects are Lloyd Jones Brewer and Associates.

Notes

1. Peter Arnell and Ted Bickford, eds., *Southwest Center The Houston Competition*, New York, Rizzoli International Publications, Inc., 1983, 10.
2. Arnell and Bickford, eds., *Southwest Center The Houston Competition*, 82.
3. Margaret Gaskie, "Toward Romantic High-Tech," *Progressive Architecture*, vol. 64, January 1983, 102-115.
4. See Fazlur R. Khan, "Multi-Story Buildings: Recent Structural Systems in Steel for High-Rise Buildings," Section 2, Paper 1 from *BCSA Conference on Steel in Architecture*, Bethlehem Steel Corporation, 1969.
5. Roland Barthes, "The Eiffel Tower," in *The Eiffel Tower and Other Mythologies*, New York, Hill and Wang, 1979, 4.

*Left to right: Binz Building, 1895, Lorehn and Friz, architects, demolished. Houston's first skyscraper. (*The American Architect and Building News, *vol. 46, Fondren Library, Rice University). First National Bank Building, 1905 and 1909, Sanguinet and Staats, architects. View of steel erection for 1909 addition (right) to 1905 original (left). Houston's first steel-framed skyscraper. (Houston Metropolitan Research Center, Houston Public Library). Main Street looking south from Rusk Avenue, 1911, showing the S.F. Carter Building (center) and the Hotel Bender under construction (left). House of Mrs. A.C. Allen, in lower-right corner, demolished later that year. (Houston Metropolitan Research Center, Houston Public Library)*

Scraping the Houston Sky: 1894-1976

Stephen Fox

Top to bottom: Main Street looking north from Capitol Avenue, 1913, showing the Rice Hotel (left), the Binz Building (right), and the Scanlan Building (right background). (Houston Metropolitan Research Center, Houston Public Library). View of Plaza Apartment Hotel (left) and adjacent Reid House on Montrose Boulevard reproduced in the Report of the City Planning Commission *(1929) above the caption: "The result of no zoning. An expensive residence heavily depreciated by a large apartment." (*Report of the City Planning Commission*). View looking north from Hermann Park toward the Warwick (right) and The Museum of Fine Arts (left), 1927. (Houston Metropolitan Research Center, Houston Public Library)*

The skyscraper is a building type that underwent its initial phases of development in New York and Chicago in the last three decades of the 19th century. Its distinguishing characteristic was the height achieved by piling floors of habitable, rentable space on top of one another. Two technological developments contributed especially to the formation of this building type: the steam-powered passenger elevator and structural framing in high-strength, low-density, non-combustible metals. The passenger elevator made it possible to transport people vertically beyond a height that stairs ceased to be practical. "Skeletal" framing in steel (and eventually in steel-reinforced concrete) made it possible to construct buildings higher than was practical with masonry bearing walls. Technical developments in foundation design, artificial illumination, and mechanical ventilation additionally contributed to the practicability of the tall building. The construction of tall buildings was a response to the burgeoning growth of American cities after the Civil War, accommodating greater numbers of people in existing urban centers and providing space from which to conduct efficiently the centralization of American business enterprise.[1]

Tall office buildings first began to be built in Texas during the 1890s.[2] Fort Worth, Dallas, and San Antonio already had experienced tall office-building construction by the time Houston's first skyscraper, the six-story Binz Building, was constructed at Main and Texas in 1894-1895. Just before the Civil War two four-story buildings had been built in Houston; the Capitol Hotel of 1883 was five stories high and possessed a passenger elevator, as did the five-story Kiam Building of 1894. Therefore, the Binz Building (demolished in 1950-1951) did not dramatically alter the profile of Houston's skyline. But because of its height it caught local imaginations. And when illustrated in *The American Architect and Building News* of 17 November 1894, the Binz Building became the first Houston building to be published in an architectural journal.

Designed by Olle J. Lorehn, a young architect recently arrived in Houston, the Binz Building was decorated with Italian Renaissance ornament. Although it possessed an interior frame of cast-iron and steel, its exterior walls were of load-bearing brick. It was not until after the turn-of-the-century that Houston's first steel-framed skyscraper was constructed, the eight-story First National Bank Building of 1903-1905.[3] However, the First National Bank Building retained its superiority for even fewer years than had the Binz Building.

Houston's First Skyline

Between 1908 and 1913 a construction boom endowed downtown Houston with a respectable skyline of buildings ranging from seven to seventeen stories in height. These tall buildings adhered to the planimetric, volumetric, and architectural conventions introduced in the Binz Building. In plan, they comprised U or L shapes to facilitate illumination and ventilation. They were slab-sided, rising straight from the sidewalk to the overhanging cornice. Elevations were divided into base, shaft, and attic zones with architectural decoration (usually of classical derivation) reserved only for the street sides; the party-wall sides were left unadorned.

In addition to offices, retail stores, hotels, and hospitals came to occupy tall buildings, as did flats. By 1913, Houston had three high-rise apartment buildings, the Savoy Apartments, the now-demolished Rossonian, and the Beaconsfield Apartments, the first two seven stories, the third eight stories. These were all located on major thoroughfares but in suburban neighborhoods rather than downtown. Beginning with the Binz Building, tall buildings were used to transform Houston neighborhoods and forcibly absorb them into the expanding commercial district. When the 16-story S.F. Carter Building (the tallest of Houston's pre-World War I skyscrapers, although the Rice Hotel of 1913 had 17 floors) and the 10-story Hotel Bender were built at either end of the 800 block of Main Street between 1910 and 1911, a two-story wooden house, set in its own little garden, was left sandwiched in between.

The design of Houston's first generation of skyscrapers was dominated by out-of-town architects. Houston clients seemed not to trust the ability of local firms to take on this building type. Two firms — Sanguinet and Staats of Fort Worth and Mauran, Russell and Garden of St. Louis (Mauran, Russell and Crowell after 1911) — were especially prolific, with Sanguinet and Staats opening a Houston branch office in 1903 to handle its local commissions. D.H. Burnham and Company of Chicago, Jarvis Hunt of Chicago, and Warren and Wetmore of New York designed one tall building apiece in Houston for local entrepreneurs or for national corporations requiring regional headquarters buildings.

As the names (Binz, Paul, Stewart, Scanlan, Settegast, Carter, Bender, Rice, Cotton) of many of Houston's earliest skyscrapers attested, they were built in part to commemorate their owners. One entrepreneur, Jesse Holman Jones, declined to comply with this practice. Instead, he named his buildings after their major tenants. Jones shrewdly understood the skyscraper to be an economic phenomenon. He built to make money and his projects were designed especially to achieve this purpose. Jones was intimately involved in the design of his buildings, which were planned to incorporate a number of profitable uses, to be expandable, and to be constructed and maintained as efficiently as possible. With the exception of the Rice Hotel, all of Jones's early buildings were built with structural frames of reinforced concrete, making them among the tallest concrete buildings in the United States during the early 1900s and, more to the point perhaps, cheaper to erect than steel-framed buildings.[4]

The Soaring Twenties

Sanguinet and Staats's S.F. Carter Building, for only a few months the tallest building in Texas, remained the tallest in Houston from 1911 until 1926. After 1913 the pace of tall building in Houston slowed. During 1917 and 1918 it halted altogether and resumed only slowly in the early 1920s. But as Houston expanded to become the largest city in Texas by 1930, another surge of tall building construction dramatically changed the appearance of the city. This was marked not only by a general increase in the height of tall buildings, but by striking compositional and stylistic developments, and by the tendency to define new suburban subcenters, far from downtown, with tall buildings. Dispensation for such developments stemmed from a mythology of the skyscraper that Rem Koolhaas has described as "delirious."[5] This romantic mythology designated the skyscraper as symbolic of a new era, an icon of the glamor of an impending modern, urban civilization.

Despite these trends, Houston skyscrapers of the 1920s still adhered to the use of U- or L-shaped plans, tripartite compositional divisions, and the custom of architecturally ornamenting only the street sides of a building, irrespective of its height. The perpetuation of these tendencies derived in part from a much greater reliance on local architects than in the previous decade. Sanguinet and Staats (whose Houston office became, in succession, Sanguinet, Staats, Hedrick and Gottlieb, then Hedrick and Gottlieb) and Alfred C. Finn (a former Sanguinet and Staats draftsman who became Jesse Jones's architect) were Houston's chief skyscraper architects during the 1920s, with Joseph Finger and James Ruskin Bailey distant runners-up. Sanguinet, Staats, Hedrick and Gottlieb were the most accomplished. Their work was especially evident on the east side of downtown, where they participated with the entrepreneur Ross S. Sterling in defining a new corridor of high-rise development along Texas Avenue. Finn (and Jesse Jones) concentrated on the Main Street corridor, which they continued to expand up the street.

New downtown buildings typically ranged from 16 stories to 22 stories in height, with two taller than 30 stories, while suburban skyscrapers rose from 8 stories to 11 stories high. Tall buildings constructed to house specialized professional or commercial tenants, a development of the '20s, resulted locally in the 16-story Cotton Exchange Building of 1923-1924 and the 21-story Medical Arts Building of 1924-1926, Houston's only neo-Gothic skyscraper, both by Sanguinet, Staats, Hedrick and Gottlieb.[6] In the near-downtown area tall-building construction remained an acceptable way to induce change in existing land use, site coverage, and height patterns. But the two tall residential hotels built near The Museum of Fine Arts in the middle 1920s, 2½-miles south of downtown, drew criticism for encroaching on newly-developed neighborhoods of single-family housing. The *Report of the City Planning Commission*, published in 1929, singled out Joseph Finger's 8-story Plaza Apartment Hotel on Montrose (1924-1926) as an example of the environmental consequences of Houston's lack of height control and zoning ordinances.

It was just such legal strictures that led to the shaping of a distinctive formal type for the 1920s skyscraper. The New York Zoning Law of 1916 established formulas for height control, mandating that as a building rose, it step back in plateau-like stages from the street line. The result was a tiered profile that architects often capped with an elaborate city crown terminus — the "setback," which by the middle 1920s had become the architectural symbol of the modern skyscraper.

The first two setback skyscrapers to be built locally were the 32-story Niels Esperson Building of 1924-1927 by the Chicago architect John Eberson, and the 22-story

Left to right: Niels Esperson Building, 1927, John Eberson, architect. (American Architect, vol. 132, Fondren Library, Rice University). View of the Gulf Building (right), the S.F. Carter (Second National Bank) Building (left foreground), and the Niels Esperson Building (left background), 1930. (Houston Metropolitan Research Center, Houston Public Library). Humble Tower, 1936, John F. Staub and Kenneth Franzheim, architects. The first Houston skyscraper to be built with a central air-conditioning system. (Houston Metropolitan Research Center, Houston Public Library).

Petroleum Building of 1925-1927 by the New York architect Alfred C. Bossom. The Esperson Building was an ebulliant production that terminated in a steel-framed, terra-cotta clad *tholos* memorializing the eponymous Niels Esperson. The massing and decoration of the Petroleum Building derived from Bossom's proposition that the Meso-American stepped pyramids of Central America represented the most valid precedent for shaping the modern American setback. The last two skyscrapers to be completed in Houston before the Depression, the 37-story Gulf Building in 1927-1929 and the 21-story Sterling Building of 1929-1931, incorporated what, in the late '20s, became the canonic modern style of the setback skyscraper, *Art Deco*. By allying flat, low-relief decoration concentrated near the ground with sculptural massing that emphasized vertical ascent, *Art Deco* eclipsed both the use of classical decor and neo-Gothic detail for the exteriors of tall buildings.

Jesse Jones's Gulf Building, at 450 feet the tallest of Houston's 1920s skyscrapers and, for one year, the tallest west of the Mississippi, summed up the extravagant skyscraper euphoria of the late 1920s. Although the design — a collaboration of Alfred C. Finn with the New York architects Kenneth Franzheim and J.E.R. Carpenter — was based on Eliel Saarinen's Chicago Tribune Building project of 1922, its stepped profile evoked Manhattan, skyscraper capital of the world, and promised to transform Houston magically into the New York of the South. The Gulf Building also exemplified what might be called the urbane skyscraper of the '20s. Its six-story base, which extended from Main Street through the block to Travis, contained the specialty store of Sakowitz Brothers, several small shops, a compact elevator lobby, and the majestic banking hall of the National Bank of Commerce. The setback tower of the Gulf Building was free-standing, square in plan, and obtained four architectural façades rather than two. Atop its four-story crown were mounted an observation deck and the Jesse H. Jones Aeronautical Beacon. At night the towers of the Gulf and Niels Esperson buildings were brilliantly illuminated, highlighting their role as the twin *stadtkröne* of the Houston skyline.

Downs and Ups

The Great Depression abruptly halted Houston's race for the sky, quashing such "delirious" proposals as a 20-story City Hall of 1929 modelled on the Los Angeles City Hall, a 21-story First Christian Church skyscraper of 1929, and a deluxe, 18-story cooperative apartment tower of 1931, to have been built alongside the residential enclave of Shadyside. The only one of these exotic visions to be built was Joseph Finger and Alfred C. Finn's Jefferson Davis Hospital on Allen Parkway (designed 1931, built 1936-1938). This was a free-standing, 12-story, cruciform-planned, setback skyscraper architecturally finished on all sides, a belated tribute to the 1920s' propensity for skyscraper public buildings.

Although the Depression proved to be a temporary setback, none of the tall buildings built between 1934 and 1942 competed in height with those of the '20s. Most were additions or annexes to existing tall buildings, the highest new buildings being the ten-story Federal Office Building of 1936-1938, the ten-story City Hall of 1937-1939, and the ten-story YMCA Building of 1938-1941. While Kenneth Franzheim's YMCA retained a somewhat 1920s-ish flavor with its picturesque setback massing and Renaissance detail, the Federal Office Building, designed by Louis A. Simon, Supervising Architect of the Treasury, and Joseph Finger's City Hall were more typical of the 1930s. The City Hall was a blocky, stepped mass accentuated by a smooth limestone skin, vertical channels containing the window bays, and panels and screens of "modernistic" ornament, the '30s successor to '20s *Art Deco*. Finger exchanged the previous decade's model (the Los Angeles City Hall) for a more up-to-date reference, Holabird and Root's modernistic Racine County Courthouse in Racine, Wisconsin of 1932.

Oil and Gas Building, 1939, Kenneth Franzheim, architect, demolished. (Photo by Elwood M. Payne. Architectural Record, vol. 87, Fondren Library, Rice University)

American skyscrapers of the first half of the 20th century did not reflect architecturally the technological developments that made their construction, maintenance, and inhabitation possible. Houston was no exception. The introduction of air-conditioning in the early 1930s, although widely heralded, did not exercise any radical effect on the design of tall buildings.[4] The nine-story Humble (now Main) Building of 1919-1921, by the New York architects Clinton and Russell, became in 1932 the first local office building to be equipped with a central air-conditioning system. Its annex, the 17-story Humble Tower of 1934-1936 by John F. Staub and Kenneth Franzheim, was the first local tall building to be built with central air-conditioning, a fact acknowledged only by the handsome neoclassical penthouse with which Franzheim capped the building to conceal the system's cooling tower. The most visible architectural concession to technological development among Houston skyscrapers involved the automobile. A limited number of buildings — three downtown and the two hotels near The Museum of Fine Arts — contained built-in parking space or minuscule (but stylistically harmonious) parking garages.

View of preliminary scheme for McCarthy Center, 1945, Hedrick and Lindsley, architects. The central building became the Shamrock Hotel, completed in 1949. (Houston Metropolitan Research Center, Houston Public Library)

It was Kenneth Franzheim, having moved his office from New York to Houston in 1937, who embraced both the car and cool air in one of his most urbane buildings, the now-demolished Oil and Gas Building of 1937-1939. The small, seven-story, L-shaped building contained a double-level attached garage, a Conoco service station (Continental Oil was the chief tenant), a ground-floor shopping arcade, street trees along three sides of the building, a setback level with extensive terraces occupied by the Ramada Club, and a crowning modernistic penthouse concealing the air-conditioning equipment.

The End of an Era

A postwar building boom that ran its course between 1945 and 1951 concluded, rather than superseded, the "delirious" era of the skyscraper that began in the 1920s. It was the last gasp of the urbane, setback skyscraper tradition in Houston. Its monuments were the 23-story City (now Southern) National Bank Building of 1945-1947 by Alfred C. Finn, the 18-story, 1,001-room Shamrock Hotel of 1945-1949 by Hedrick and Lindsley, the 16-story Hermann Professional Building of 1947-1949 by Kenneth Franzheim and Hedrick and Lindsley, and the 18-story Prudential Building of 1950-1952 by Kenneth Franzheim.

The most interesting were the latter three, for they defined an extension of the museum-area subcenter in "uptown" Houston, adjacent to the newly-established Texas Medical Center. Glenn H. McCarthy, who built the Shamrock, envisioned it as the centerpiece of McCarthy Center, a suburban skyscraper city based on the model of Rockefeller Center in New York of 1930-1940. Franzheim mixed modernistic details and massing with historical ornament at the Hermann Professional Building, as had Hedrick and Lindsley at the Shamrock. Historical quotations were dispensed with at the Prudential Building (now the University of Texas Health Science Center), which occupied a 27½-acre site containing gardens, tennis courts, a swimming pool, and parking lots. Instead, Franzheim composed it as a series of stepped slabs, also on the Rockefeller Center model. The Prudential's architecture was stodgy but it met the ground confidently and put on a good show up top, where the company's name and insignia, the Rock of Gibraltar, were featured in spectacular, Texas-sized neon displays. The Prudential Building was the first tall office building to be constructed outside downtown Houston. All three of these uptown buildings were free-standing, but the Shamrock still preserved a distinction between its front façade and its massive rear elevation, which abutted the one- and two-story houses of Braeswood.

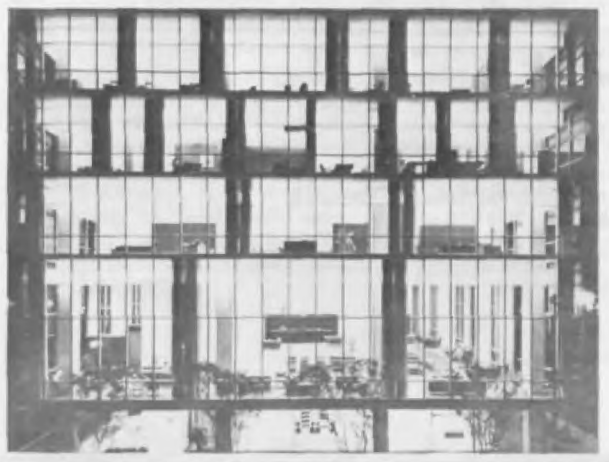
Although Kenneth Franzheim replaced Alfred C. Finn as Houston's principal skyscraper architect during the late 1940s, his firm's work began to display a loss of direction thereafter. For in attempting to come to terms with modern (rather than modernistic) architecture, Franzheim's buildings became less convincing urbanistically and only marginally more up-to-date. The urbane formulas prevailed at the aggressively green 21-story Texas National Bank Building of 1952-1955 and the 24-story Bank of the Southwest Building of 1953-1956, but the magic was gone. The old formulas no longer worked. And despite the fact that the Bank of the Southwest Building was faced with Houston's first all-aluminum curtain-wall, that its underground passageways to the Commerce Building and the Ten-Ten Garage inaugurated the downtown tunnel system, and that Florence Knoll designed its immense banking hall (which contained a mural by Rufino Tamayo), the impact of the new was still too weak to compensate for the exhaustion of the old. Franzheim's last tall building in Houston was a tactful, appropriate, but no longer assured 16-story annex of 1958-1960 to Warren and Wetmore's grandiloquent Texas Company Building of 1915.

The Forward Look: Modern Architecture Arrives

During the 1950s most new office construction occurred outside the central business district, which underwent a period of stagnation that for a time provoked considerable alarm. The modernist counterparts of Franzheim's buildings typically were small, occupying less than full-block sites, and therefore conforming (by necessity rather than design) to the urbane tradition: U or L plans, small lobbies, retail shops and services on the ground floor entered directly from the street, even the despised distinction between "front" and "back." As an ideal form the preferred alternative to the setback was the slab, with blank end-walls bracketing long expanses of gridded glass, aluminum, and porcelain-enameled curtain-wall, "floating" above ranks of exposed structural columns at the ground-floor level. The image, derived from Le Corbusier's tall-building designs of the late 1920s and 1930s, filtered through his design for the Secretariat of the United Nations in New York of 1947 (as executed by Harrison and Abramowitz in 1950) and Lever House, also in New York of 1950-1952, designed by the firm of Skidmore, Owings and Merrill. Paradoxically, America's "modern" tall buildings of the 1950s were as dependent on the late 1920s as were their old-fashioned modernistic competitors.

Hermon Lloyd and W.B. Morgan produced Houston's first modern skyscraper, the 21-story Melrose Building of 1949-1953, approaching the Corbusian model more closely though with The Mayfair, a 16-story apartment building of 1953-1956 near the Prudential Building. The Lever House *parti* (a horizontally aligned slab floating on structural columns, atop which a vertically aligned slab was positioned) was omnipresent locally. But it lent itself to considerable variation, ranging from the doctrinaire (Skidmore, Owings and Merrill's first Houston building, the 18-story Medical Towers of 1954-1957 in uptown Houston, for which Golemon and Rolfe were architects of record,[5] to the clunky (Wirtz, Calhoun, Tungate and Jackson's 16-story Memorial Professional Building of 1955-1958, now demolished, faced with a garish turquoise-and-gold anodized aluminum curtain-wall), to the chunky (the 11-story World Trade Center of 1959-1962 by Wilson, Morris, Crain and Anderson, where the *parti* was adhered to, but the proportions were somewhat off). In recognition of Houston priorities, the floating horizontal bases of the Medical Towers and the Memorial Professional Building were filled with parked cars. Disregarding the Lever House formula was the five-story Gibraltar Building of 1957-1959 by Greacen and Brogniez and J.V. Neuhaus III. Sheathed on three of its four sides entirely in heat-absorbing solar gray glass, Houston's first all-glass curtain-wall was indebted nonetheless to Le Corbusier, who had proposed such an all-glass curtain-wall with his *mur neutralisant* of 1929.

The changes that these modern buildings made to the appearance of Houston in the 1950s were slight. In contrast to Dallas, where Harrison and Abramowitz's Republic National Bank Building (1954), William B. Tabler's Statler Hilton Hotel (1955), and Welton Becket and Associates' Southland Center (1958) were the biggest and most conspicuous of a group of modern towers exhibiting the forward look in '50s modern architecture, Houston's skyline still peaked at the Gulf and Niels Esperson buildings. There were no concentrations of new tall buildings. Most were dispersed along the Main




Left to right: Night view of Gibraltar Building, 1960, Greacen and Brogniez and J.V. Neuhaus, III, architects. (Photo by Harper Leiper, Arts and Architecture, vol. 77, Fondren Library, Rice University). View of original scheme for Cullen Center, 1960, Welton Becket and Associates, architects. (Arts and Architecture, vol. 77, Fondren Library, Rice University). Tennessee (now Tenneco) Building, 1963, Skidmore, Owings and Merrill, architects. Surrounding it are the Oil and Gas Building (lower left), the Medical Professional Building (middle left), and the Southwest Tower (middle right), all demolished. (Houston Metropolitan Research Center, Houston Public Library). One Shell Plaza, 1970 (center), and Two Shell Plaza, 1971 (left background), Skidmore, Owings and Merrill and Wilson, Morris, Crain and Anderson, architects. (Photo by Ezra Stoller, Skidmore, Owings and Merrill)

Street corridor. Even in uptown Houston the skyline was dominated by Franzheim's and Hedrick's postwar setbacks.

The Tower in the Plaza

This trend reversed suddenly in the late 1950s. Between 1958 and 1960, the 32-story First City National Bank Building by the New York office of Skidmore, Owings and Merrill with Wilson, Morris, Crain and Anderson (1958-1961), the 44-story Humble (now Exxon) Building by the Los Angeles architects Welton Becket and Associates with Golemon and Rolfe and George Pierce-Abel B. Pierce (1958-1963), the 33-story Tennessee (now Tenneco) Building by the San Francisco office of Skidmore, Owings and Merrill (1960-1963), Cullen Center, a 6-block urban renewal-style planned development by Welton Becket and Associates (1960-1963), the 28-story Sheraton-Lincoln Hotel (1960-1962), and the 21-story Southwest Tower (1960-1963, now demolished), both by Kenneth Bentsen Associates, were announced. These buildings provided downtown Houston with a sharp, clean-lined, classic modern skyline that made Dallas's look dowdy by comparison. At 600 feet, the Humble Building topped the Gulf Building and was, for one year, the tallest building west of the Mississippi.

All of these buildings were constructed by corporations for their own occupancy. Almost all occupied full block sites and those that didn't (Bentsen's two buildings) were set back from the property lines. This permitted conformance to the newest model for emulation, Ludwig Mies van der Rohe and Philip Johnson's Seagram Building in New York of 1958, which was set back from the sidewalk to make room for an open, paved plaza from which the building rose as an isolated tower. The image of the tower in the plaza governed Houston's newest high-rises. All were based on square or rectangular plans constituted by a repeating module determining the dimensions of the structural bays, the curtain-wall, the internal partitioning systems, the hung, acoustical ceilings, panels of fluorescent lighting fixtures, and even, in some cases, the furniture layouts. Central elevator and service cores permitted a uniform depth of leasable space on all sides of the buildings and helped to reduce the number of internal columns required. Such thorough rationalism made modern architecture very attractive economically. The use of nationally-known architecture firms brought to Houston's new high-rises a level of currency and quality not experienced since the early part of the century. Moreover, the practice of having Houston architects associate with the imported firms raised local standards of tall-building design considerably.

The deployment in most of these buildings of an externalized structural frame (what Skidmore, Owings and Merrill called an "exo-skeleton") that doubled as a *brise-soleil* (literally a "sun-break," another invention of Le Corbusier) rendered them "truthful," environmentally responsive (therefore "regional"), and more interesting visually (and more dignified) than the flat, flashy curtain-walls of the '50s. The grid remained, but the scale was more monumental. External finishes, whether of glass and porcelain enamel, anodized aluminum, marble, or precast concrete, were monotone and sober. The creation of ground-level plazas finished with elegant paving, planting, and fountains seemed to represent a tasteful, enlightened alternative to the crowding of drug stores, beauty parlors, coffee shops, and shoe repair stands up to the sidewalk. Such services were tucked discreetly into the basement if their presences were deemed necessary.

The tall office buildings of the 1960s possessed as strong a type form as those of the late 1920s and 1930s. Individually, those built in Houston were exemplary, and their effect on the skyline was exhilarating. But for urbanity they substituted rational planning and good taste. Collectively, these buildings, isolated in their plazas, tended to erode rather than relieve the fabric of downtown Houston, which, under the impact of retail flight and the economics of speculation, slowly came unraveled. For although implicitly dependent on the existing fabric to provide a dense, contrasting "city-scape," new high-rises tended to go up amidst blocks of land cleared of earlier development for asphalt-topped parking lots, awaiting the day when tall office buildings would be built upon them as well. Instead of "cleaning up" downtown Houston, these lithe, graceful, modern towers participated in its cleaning-out.[10]

The Rise of Suburban Skylines

Complementing the reshaping of the downtown skyline was a suburban high-rise boom that began in the middle 1960s. Emerging as nodes of tall-building development were Sharpstown Center in Frank W. Sharp's 6,500-acre Sharpstown, 9½ miles southwest of downtown, Greenway (now Greenway Plaza), at the western terminus of the Richmond Avenue "Office City" corridor, and the Post Oak-Westheimer intersection, 5½ miles west of downtown. Predicated upon access by private automobile, each of these sites adjoined a part of the regional freeway network then under construction. Each was conceived as an internally-focused development, marrying the planning and design techniques of modern architecture and urbanism to the economics of speculative real estate development.

Of these, the two most cohesive were Greenway, a 41-acre office and residential park begun in 1963 but sold in 1967 to Kenneth Schnitzer's Century Properties, and the Galleria Post Oak at Post Oak and Westheimer on a site purchased in 1964 by Gerald D. Hines Interests. Schnitzer doubled the size of Greenway Plaza by buying-out an entire restricted subdivision that adjoined it to the west and retained Lloyd, Morgan and Jones to replan the tract. They adopted the tower-in-the-park strategy first proposed by Le Corbusier, arranging a series of 11-, 21-, and 31-story office buildings built between 1968 and 1973 atop a landscaped podium containing a parking garage and a retail concourse. Hines retained Hellmuth, Obata and Kassabaum of St. Louis and Neuhaus and Taylor to plan the Galleria as a three-level, enclosed shopping mall to which were attached two office towers of 22 and 25 stories, a 22-story hotel, and the specialty store of Neiman-Marcus. It was opened in stages between 1969 and 1973.

New Directions

By the end of the decade Century Properties (now Century Development) and Gerald D. Hines Interests had emerged as the two major developers of high-rises in Houston. Both began planning their first major downtown buildings in 1965: Century the 28-story Houston Natural Gas Building by Lloyd, Morgan and Jones (completed 1967) and Hines the 50-story, 715-foot tall One Shell Plaza by the Chicago office of Skidmore, Owings and Merrill and Wilson, Morris, Crain and Anderson (completed 1971). These marked the course for the immediate future in Houston: new tall buildings would be built by developers rather than by corporations for their own use.

One Shell Plaza closed out the '60s architecturally as it introduced the '70s entrepreneurially. It was the perfect tall office building: economically determined, optimally planned, structurally innovative, and architecturally pure in its glistening mantle of travertine.[11] Slightly boring but prestigious nonetheless, One Shell Plaza established Smith Street as downtown's new avenue of skyscrapers, sired two progeny (the adjacent 26-story Two Shell Plaza and the 50-story One Shell Square in New Orleans, both by SOM and WMCA for Hines), and recaptured for a Houston building (if only briefly, once again) the title of tallest west of the Mississippi. Gerald Hines approached real estate development with the acumen of Jesse Jones; he keenly understood the economic nature of the tall building and how to exploit it for maximum profit. He also discovered that the name recognition value of designer architecture figured importantly in attracting both project financing and prime corporate tenants. Hines thereby became the first real estate developer since Herbert Greenwall and William Zeckendorf to be acclaimed a patron of architecture.[12] In Houston his example was instrumental in maintaining the generally high standards of high-rise architecture achieved in the early 1960s.

The Shapes of Things to Come

By 1970 the most critical architectural problem confronting the design of tall office buildings in Houston seemed to be the avoidance of repetition. Philip Johnson and John Burgee's Pennzoil Place (1970-1976) and Post Oak Central (1973-1976), both with S.I. Morris Associates for Hines, resolved that problem decisively and opened the present era in Houston's skyscraper history. Pennzoil, although clad in a Seagram-like curtain-wall, broke every rule that made One Shell Plaza the perfect office building. Every rule but one, that is. It was immensely successful financially. That was the point of the tall building in the first place, and in Houston it still is.

Notes

1 On the history of the skyscraper, see: Francisco Mujica, *History of the Skyscraper*, New York, DaCapo Press, 1979, first published 1929; Alfred C. Bossom, *Building to the Skies: The Romance of the Skyscraper*, London, The Studio Limited, 1934; Carl W. Condit, *American Building Art: The Twentieth Century*, New York, Oxford University Press, 1960; Winston Weisman, "A New View of Skyscraper History," in Edgar Kaufmann, Jr., editor, *The Rise of an American Architecture*, New York, The Metropolitan Museum of Art and Praeger Publishers, 1970, 113-160; Paul Goldberger, *The Skyscraper*, New York, Alfred A. Knopf, 1982; Jeffrey Karl Ochsner, "Tall Buildings: Houston as a Case in Point," *Texas Architect*, vol. 32, May/June 1982, 38-45; and John Pastier, "The Cardboard Skyscrapers of Texas, 1911-1932," *Texas Architect*, vol. 32, May/June 1982, 55-57.

2 Willard B. Robinson and Todd Webb, *Texas Public Buildings of the Nineteenth Century*, Austin, University of Texas Press for the Amon Carter Museum of Western Art, 1974, 111-113.

3 Designed by Sanguinet and Staats and expanded in 1908-1909 and again in 1922-1925, the First National Bank Building may have been the first steel-framed skyscraper in Texas, inasmuch as Dallas's first steel-framed skyscraper, the 14-story Praetorian Building by C.W. Bulger and Son, was not built until 1909.

4 Condit, *American Building Art*, 156-159. Jones's first downtown building was the nine-story, concrete-framed Bristol Hotel Annex of 1908-1909 (demolished 1953). This was followed by a series of other concrete-framed buildings: the ten-story Chronicle and ten-story Texas Company (now Bankers Mortgage) buildings of 1909-1910 by Mauran and Russell, and the ten-story Foster and ten-story Gulf (now Houston Bar Center) buildings, both by Alfred C. Finn (all extant but refaced). According to his biographer, Jones had wanted Houston to remain a "ten-story city," but built higher than that after the S.F. Carter Building was constructed. See Bascom N. Timmons, *Jesse H. Jones, The Man and Statesman*, New York, Henry Holt and Company, 1956, 77-83.

5 Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan*, New York: Oxford University Press, 1978; also Diana Agrest, "Architectural Anagrams: The Symbolic Performance of Skyscrapers," *Oppositions 11*, Winter 1977, 26-51.

6 The first specialized medical professional building in the United States traditionally is said to have been the 19-story Medical Arts Building of 1923 in Dallas by Barglebaugh and Whitson. The tallest concrete-framed building in the world at the time of its completion, it was demolished in 1978.

7 Condit, *American Building Art: Materials and Techniques from the First Colonial Settlement to the Present*, Chicago, The University of Chicago Press, 1968, 178.

8 The first primitive air-conditioning system in Houston was installed by the Dixie Heating and Ventilating Company in the banking hall of the Second National Bank in the S.F. Carter Building in 1922. Two years later, a Dixie system was installed in the cafeteria and coffee shop of the Rice Hotel. See "Air Engineering," *Houston*, vol. 4, August 1933, 9; and, in the same issue, "Air Cooling Everywhere," 10-11. The issue also contains an advertisement for the Dixie company on page 9 listing their installations in Texas, Louisiana, Florida, Alabama, and Tennessee, most of which were in movie theaters.

Reyner Banham identified George Willis's 21-story Milam Building in San Antonio of 1928 as the first centrally air-conditioned tall office building in the world, as well as the tallest concrete-framed building in the world at the time of its completion. See Reyner Banham, *The Architecture of the Well Tempered Environment*, Chicago, The University of Chicago Press, 1969, 178-179.

9 The Medical Towers was the first Houston building to win a *Progressive Architecture* Design Awards citation (1954) and the first tall Houston building to win an AIA Award of Merit (1957). The only other tall Houston buildings to receive an AIA Honor Award have been the Tenneco Building (1969) and Pennzoil Place (1976).

10 Because Houston had no planning controls, all sites, in theory, were eligible for high-rise construction. Those who paid high prices for "underdeveloped" property were encouraged by taxing policy to demolish existing improvements (often low-rise retail buildings leased to merchants facing increased rents coupled with a disappearing clientele), thereby allowing sites to revert to an unimproved status, lowering taxes to a minimum, but generating income by using the cleared sites for surface parking.

11 At One Shell Plaza, SOM's structural engineer, Fazlur Khan, devised what he called a framed-tube type of structural system, combining it with the use of light-weight concrete to achieve significant reductions in construction cost. The building's designer, Bruce Graham, articulated the structural properties of the external wall tube by rippling its surfaces where the structural loads were greatest. At the time of its completion, One Shell Plaza was the tallest concrete building in the world. See Gene Dallaire's interview with Joseph P. Colaco, "The Quiet Revolution in Skyscraper Design," *Civil Engineering/ASCE*, vol. 53, May 1983, 54-59.

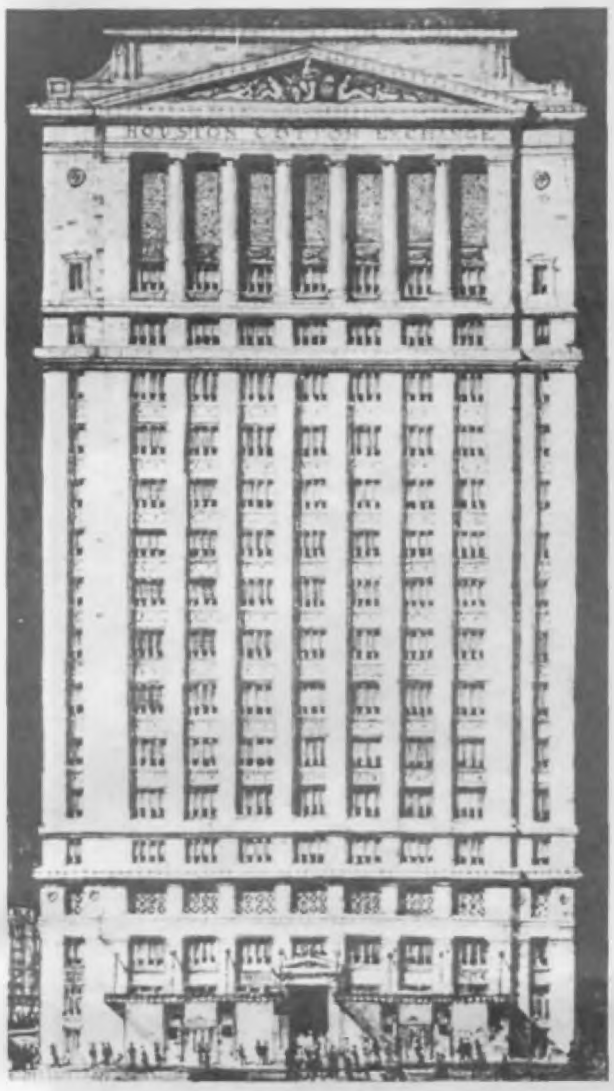
12 Paul Goldberger, "High Design at a Profit," *The New York Times Magazine*, 14 November 1976, 76-79.

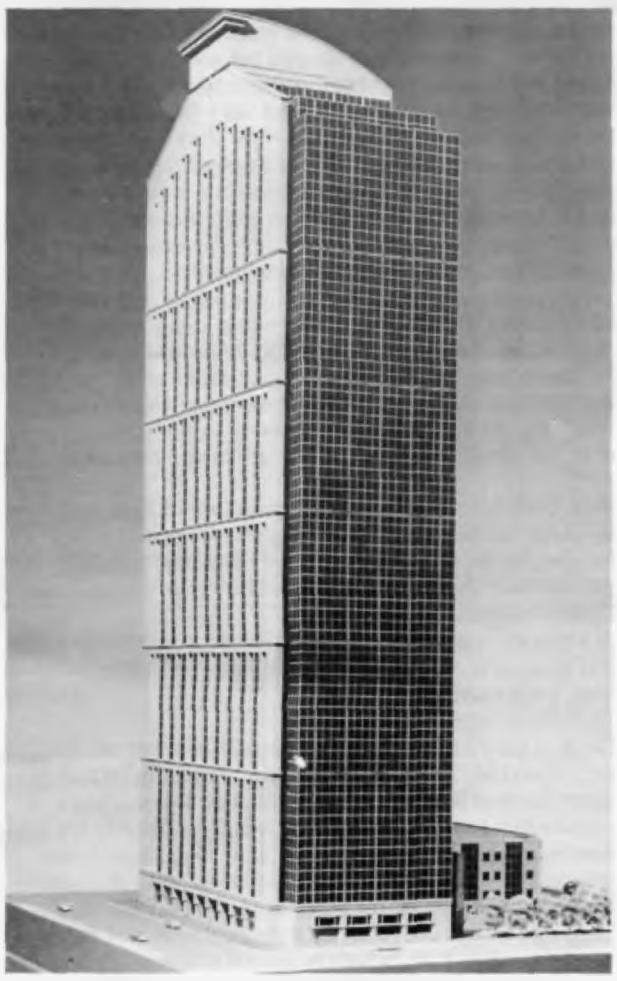
CiteSeeing

Great Skyscrapers That Never Were– Or Have Yet To Become

In less than a century a Houston skyline has risen out of the coastal prairie. This artificial topographic formation shifts, re-forms, and increases in stature with amazing fluidity, as unstable and unpredictable as the expansive clay soil on which it is set, as mercurial as the atmosphere into which it ascends. But tall buildings, the constituent elements of this formation, do not grow organically; they are made.

Some tall buildings, however, are envisioned but never realized. Out of this limbo of unfulfilled expectations remarkable proposals have arisen, but only on paper. Illustrated are a series of towers that might have changed the profile of this formation, had not circumstances precluded their translation from image into building. Presented also are several proposed designs whose construction is still pending. Their profiles may yet reshape our view of the distant horizon.





Left, top: Houston Cotton Exchange Building, 1921. William Ward Watkin, architect. This 17-story tower was one of several projects submitted in competition. (Houston Metropolitan Research Center, Houston Public Library). Left, center: Adams Petroleum Center, 1954. Donald Barthelme and Hamilton Brown, architects. The 3-story base was completed in 1957; the 17-story tower was never built. (Houston Metropolitan Research Center, Houston Public Library). Left, bottom: Twin Towers Office Buildings, 1978. Johnson/Burgee Architects and S. I. Morris Associates, architects. Two 47-story office buildings planned for Cullen Center, Inc. (Photo by Richard Payne, AIA). Above: 1700 Travis, 1982, Morris Aubry Architects, architects. A 70-story office tower commissioned by Alfanco, Inc. (Morris*Aubry Architects). Right, top: Office Building, 1982. Kohn Pedersen Fox Associates, architects. This 80-story office tower will be built adjacent to the Kellum-Noble House of 1847 in Sam Houston Park. (Kohn Pedersen Fox Associates) Right, center: Red Wolf Hotel, 1948. Kenneth Franzheim, architect. A 20-story hotel planned for a site in uptown Houston near the Texas Medical Center. (Houston Metropolitan Research Center, Houston Public Library) Right, bottom: Office Building, 1981, Kohn Pedersen Fox Associates, architects. A 40-story "annex" to the Federal Land Bank Building of 1929. (Kohn Pedersen Fox Associates)*

Gordon Wittenberg

The Environmental Impact of Tall Building

(Photo by Paul Hester)

After an absence of some years, anyone who returns to an American city is inevitably surprised by the radical change that has occurred in its skyline. Indeed, the skyline of every major American city, with the exception of Washington, D.C., and Philadelphia, has been completely changed over the last 20 years by the construction of large numbers of high-rise office buildings. In addition, a number of *very tall* buildings (50 floors and up) have appeared in many of these cities. In Houston, several buildings of more than 70 stories have been built and an 82-story building with a projection approaching 100 stories in height is in the site-preparation stage. Wind-tunnel tests have been completed on a 160-plus-story building for Chicago. Other very tall structures are being proposed for Denver and New York. As it appears that the American city of the future is going to be characterized by large concentrations of tall buildings, it might be prudent to consider just what the long-term impact of these structures will be and what the consequences for the future of the city might be.

Long-Term Urban Impact

In 1978 the Chrysler Building was declared a National Historic Landmark. This is significant because it suggests that tall buildings have existed as a building type long enough to draw conclusions about their long-term life and their impact on the urban environment.

New York has the greatest concentration of high-rise buildings in the world. This concentration has existed for some time. It also has three of the tallest buildings in the world — the Empire State and the twin World Trade Center towers. Though Houston is a very different sort of urban environment, we might expect some of the general long-term effects of tall building observed in the New York example.

There is very little information available about the long-term economic life of tall buildings. From the relatively recent interest in rehabilitating commercial structures, it appears that buildings can have lives significantly longer than their first economic life. In New York, significant renovation in both commercial and residential structures has been taking place for some time. The bulk of the buildings being renovated predate the 1920s and are relatively small in size, which is related to the economics of renovation. Newer buildings have not generally been renovated but demolished. Most recently, preservation advocates have achieved landmark status for Lever House (Skidmore, Owings and Merrill, architects, 1952) to prevent demolition. Not only is this building only 32 years old, it has received world-wide recognition as one of the earliest and best examples of the modern slab office building. A similar fate awaited the Chrysler Building. After 1960 the owners of the Chrysler Building, Goldman-Dilorenzo Interests, could only service the huge mortgage on the building by effectively eliminating any maintenance on the property. This led to, among other things, the accumulation of 1,200 cubic yards of trash in the basement, numerous leaks, and other serious problems which drove tenants away and doomed the structure to certain demolition. It was saved from this fate only by a takeover by the principal mortgage holder, the Massachusetts Mutual Insurance Company, and the investment tax credit that landmark status made possible.[1]

There are many reasons that a relatively new structure of unquestioned architectural historic value such as Lever House might be demolished, not the least of which is the continued extremely high value of land in Manhattan. However, it is ironic that Lever House could not be renovated at less overall cost than constructing a completely new structure. Indeed, this is true for most high-rise buildings and if this condition is exacerbated by the height of the building, a serious future problem is created wherever there are concentrations of these buildings. In the case of the Chrysler Building the maintenance service was reduced and as a result many tenants decided to move. While the area around the building did not seriously decline in value, the building enjoyed a very negative reputation. Would anyone have imagined this possible when the building was completed in 1927?

Another serious question regarding the impact of tall buildings is related to their effect on the surrounding urban environment. We all have observed the phenomena of lobbies crowded early in the morning and late in the afternoon but devoid of life at other times. The concentration of population in very tall buildings means that the street level must be allocated almost completely to circulation space. The little commercial space that remains is too expensive for small-scale retail operations that used to inhabit the street level. As tall buildings are constructed in larger and larger numbers, the surrounding streets become less populated and therefore less able to support small-scale commercial activity. In other words, a vicious circle is initiated in which fewer and fewer people have any direct interest in the public space. The street becomes an unused, and potentially dangerous, area.

Beginning in the 1950s a number of critics of urban planning — perhaps the best known of which was Jane Jacobs, author of *The Life and Death of Great American Cities* — warned of this disturbing development in the "modern city." They argued that the seemingly chaotic network of small businesses and mixed use that characterized the streets of the traditional city was an important social mechanism. Besides providing a stimulating environment, rich in random associations, the businesses had a vested interest in the safety of the street and supervised it as such. More recently, such observers of urban crime patterns as John Q. Wilson of Harvard University, have recognized a relationship between intermittent use, lack of supervision, and random violence.

The purpose of this argument is not to suggest that high-rise building is responsible for street crime. However, it does appear that this type of building contributes to a pattern having negative consequences. In recognition of this, New York zoning laws were changed in 1979 to mandate retail space on the street level of commercial structures. Other cities have adopted "bonus" programs to stimulate redevelopment of the downtown street area.

Planning and Development Patterns

The tall building has become a component of the planning of American cities, especially those developing like Houston. In such localities as Dallas or Denver, this phenomenon happened under the watchful eyes of a planning agency, while in such others as Houston, the same phenomenon occurred exclusive of public controls.

In the 1930s and '40s planners began to realize that the flight to the suburbs would exert serious consequences on existing downtown areas. Urban design theory strongly supported the redevelopment of downtown areas in conformance with modernist planning ideals on the model of many European cities rebuilt after World War II. In the 1950s the United States government supported this goal by instituting the Urban Renewal Program that made possible the public condemnation and clearing of large tracts of downtown property. This laid the groundwork for the eventual commercial revitaliza-

Theodore H. Davies Building, view of courtyard (Lost America, From the Mississippi to the Pacific, *Princeton, Pyne Press, 1973) A block square building configured around an internal court.*

tion that has taken place in many American cities. However, this process lent a distinctive flavor to the character of redevelopment. It was narrowly effective and favored large-scale projects of the type we have been discussing. Consequently, the single-minded and segregated planning of modernist urbanism and modern economics has produced downtowns that suffer from the same general problems: the lack of activity during the day and the threat of danger at night. As downtown redevelopment was accomplished, the reason for subsidizing downtown development ceased to exist. However, this planning trend has not been altered and the ideas of centralizing commercial functions and constructing larger and larger buildings to house them continues to be stimulated today by such programs as the Urban Design Action Grant Program (UDAG).

Houston is a good case in point of how strong the momentum for centralization has become. In 1974 the Environmental Protection Agency issued an ultimatum to the City of Houston to improve sewage treatment or stop new development.[4] The city's response was to declare a "sewer moratorium" on all new construction. In what often has been described as a "brilliant" stratagem, the city managed to trade plant capacity so that construction was limited to existing capacity in all areas but the central business district. In a small area, which included the CBD, no restrictions were imposed; the sewer moratorium did not exist. With similar logic, a metro system has been proposed that fixes, once and for all, the focus of development on the downtown area. Whether or not the system is economically justifiable, it represents so large a public investment that the city would be obliged to support growth along it.

Obviously, economically active downtown areas are important to a city's image and tax base. However, increased centralization supports a building type with questionable future consequences. Although concentration of commercial growth in center-city areas was important at one time, it may be that other strategies that support a variety of forms of development are preferable today.

Operating and Maintenance Costs

Prior to the 1973 Arab oil embargo, the management of the twin World Trade Center towers in New York boasted that the buildings (population 50,000) consumed more electrical energy than the city of Schenectady, New York (population 100,000).[5] This raises another disturbing issue of tall building: future users are compelled to perpetuate a high future energy-use pattern.

Research done by the Building Owners and Managers Association suggests that, on a national average, office buildings consume about 75,000 BTUs of end-use energy or 112,500 BTUs of source energy per square foot of office space.[6] At present, the construction costs of an average office building are exceeded by its utility costs in approximately 11 years. This has changed on the order of 300 percent, from a 30-year recapture as recently as in 1960.

All available information indicates that very tall buildings exceed these consumption figures by about 15,000 BTUs/sf of end-use energy, or 20 percent. This implies an even more rapid capture of capital by operating costs in this building type.

There are many reasons why tall buildings consume so much energy. The elevators and pumps required to service the upper floors attach an energy-use premium to building height of about 10 percent. Another source of energy consumption is related to the sheer size and bulk of the buildings. While it is true that large-scale mechanical systems have some inherent efficiencies, they have difficulty handling variable-sized loads. That is to say the machinery is efficient when operating at 100-percent capacity but cannot operate efficiently when only a few floors or single offices require air-conditioning. During a typical year, the majority of operating time is in such a partial demand mode.

The largest environmental premium paid for very tall buildings, however, is a product of the scale and inflexibility of the floor plan. The greatest single consumer of electricity, and the greatest single source of heat that the air-conditioning system must overcome, is the lighting system. Almost half (about 40 percent) of the air-conditioning tonnage in high-rise buildings is provided to offset the heat generated by lighting systems. Consequently, air-conditioning may be required 12 months of the year, even in Chicago and New York. Many very tall buildings become larger at the base; other, slab-type buildings may maintain the same shape for their entire length. In either case, the sheer size of floor and depth of lease space virtually eliminates any possibility of using increased exposure to natural light to offset artificial-lighting requirements. Consequently the building form tends to "lock-in" the inefficiency of large buildings and prohibit increased efficiency at a future date.

In view of serious consequences in the future, why are these buildings still built? Many people assume that they are the inevitable product of the balance sheet and the real estate development process. There appears to be, however, a considerable body of evidence that suggests that high-rise buildings, especially very tall ones, are surprisingly subjective products, built as much for symbolic as financial opportunity.

Building Costs

There is no question that tall buildings are inherently more expensive than equivalent space in other height configurations. It is difficult to say exactly how much more expensive, because developers and clients are generally secretive about the ultimate cost of these projects. Preliminary cost information was available on the following Houston projects. It is generally accepted that the actual cost exceeded this amount by, in some cases, a considerable percentage.

Available information would place the cost of a structure roughly comparable in quality and below ten floors at approximately $70/sf.[8] Therefore the very tall building represents an approximate 20 percent premium building cost over lower-building configurations.

The major component of this increment is the cost of the structural system. There have been a number of significant changes in the engineering of tall buildings that have led to a dramatic reduction in the amount of steel in very tall structures. The Empire State Building (1929-1931) used an average of 50 pounds of steel/sf of building area, while the Sears Tower in Chicago (1972-1974) used less than 15 pounds of steel/sf of building area. Much of this reduction was due to the pioneering work of engineers like the late Fazlur Khan of the Chicago office of Skidmore, Owings and Merrill.[9] Khan observed that the primary forces in tall buildings were induced by wind loading rather than gravity, and he developed the framed-tube system of wind bracing that is now utilized almost universally in high-rise buildings above 40 floors. Even at the theoretical optimum, however, Khan observed that the amount of structure must increase dramatically in response to building height. For example, a 60-story structure must utilize about 30 percent more steel/sf than a 20-story structure of comparable floor area.

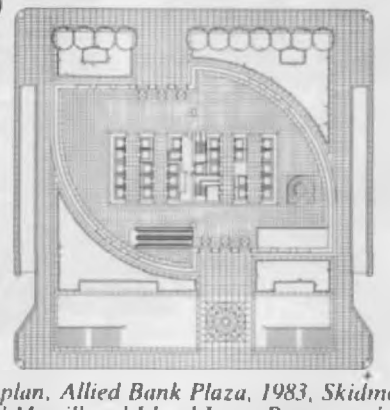
Vertical circulation systems are another major cost generated by increased building height. Many buildings in excess of 40 floors use a dual elevator system incorporating low-rise and high-rise elevator banks. The low-rise elevators are conventional in design and serve the lower half of the building. Faster and more sophisticated elevators serve only the top floors of the building. Very tall buildings may utilize three sets of elevators through a sky lobby. Conventional elevators serve the building's lower floors and serve the highest ones from the sky

Recent Houston Tall Building Projects

Project	Developer	Date Project Announced	Floors, Heighth	Gross Area (in square feet)	Budget (in millions)	Cost per Square Foot
Texas Commerce Tower in United Energy Plaza	Gerald Hines Interests	14 April 1978	75 (1,002 ft.)	2 million	$145	$85
Allied Bank Plaza	Century Development Corp.	3 June 1980	71 (970 ft.)	2 million	$200	$100 plus
RepublicBank Center	Gerald Hines Interests	19 June 1981	56 (777 ft.)	1.5 million	$180	$120
Transco Tower	Gerald Hines Interests	8 July 1981	64 (901 ft.)	1.6 million	$200	$125
Southwest Center	Century Development Corp.	11 October 1981	82 (1,400 ft.)	2 million	$350-$400	$175-$200

Galleria Vittorio Emanuele, Milan, 1865-1877, Giuseppe Mengoni, architect (Architecture: Nineteenth and Twentieth Centuries, *Baltimore, Penguin Books, 1958)*

Theodore H. Davies Building, Honolulu, 1921, Louis Christian Mullgardt, architect, demolished. A block square building configured around an internal court. (Lost America, From the Mississippi to the Pacific, *Princeton, Pyne Press, 1973)*



Plaza level plan, Allied Bank Plaza, 1983, Skidmore, Owings and Merrill and Lloyd Jones Brewer and Associates, architects (Skidmore, Owings and Merrill)

lobby. A third class of very specialized elevator travels directly from the ground floor to this intermediate lobby. This class of elevator is the largest, fastest and most expensive, averaging as much as $500,000 per unit as compared to approximately $100,000 per unit for the conventional type.[10] A building utilizing six of these elevators adds a premium of several million dollars to the construction cost, a cost directly related to building height.

A new premium for high-rise buildings in the Houston area has been generated by the new high-rise building code requiring sprinklers in buildings above nine floors. The nine-floor height is determined by the maximum access of fire department ladder trucks. There has been much public discussion of the fire danger inherent in very tall, sealed buildings. This in itself constitutes a serious criticism of very tall structures. While the sprinkler system cannot guarantee safety (cf. smoke-related casualty), it has been accepted for the time being as a sufficient fire-suppression device. The cost of a sprinkler system may add as much as $2/sf to the cost of a structure and this, too, is a direct cost of building height. Even with the provision of sprinklers there is significant evidence that fire safety still presents a serious problem in tall buildings. In all high-rise fires to date the highest proportion of loss of life has occurred due to smoke inhalation, and smoke generation will not always activate a sprinkler system.

These major expense areas, in addition to a number of others, result in high-rise buildings (especially very tall ones) that are inherently more expensive than lower-scale buildings of comparable quality. The premium seems to increase geometrically in relation to building height above approximately 10 floors. A 70-floor building may be 20 percent or even 30 percent more expensive than a building under 10 floors of comparable floor area.

Highest and Best Use

The high-rise building has become a symbol of commercial success and the land-development process. As such these buildings seem to represent the "highest and best use" of real estate and the most profitable building investment.

When most people see a downtown area with a number of high-rise structures, they assume that the size of the structures is related to the price of land. More specifically, that the price of land is so significant a factor that the building area must be increased proportionately. It is interesting to investigate this conclusion with regard to an actual project in downtown Houston. A 62,500 square-foot land area, purchased previously by the owner, had a market value of about $12.5 million.[11] A building area of 1.5 million square feet was constructed on this site for approximately $85/sf or $127.5 million. This makes the cost of the site about $10/sf or less than 10 percent of the cost/sf of $85. How significant is this cost? It is no greater than the cost of any major subsystem of the building (structure, air-conditioning, elevators, foundations, exterior wall, lighting). The ratio of land to building cost is, in fact, far less than that used in other types of development such as housing, where land cost may be as high as 20 to 25 percent of project cost. Consequently, in the Houston area, land cost is not the major factor it may appear to be and can be compensated for by economics in the building subsystems. This suggests that land cost is not the only significant factor in the decision to build very tall buildings and that the ratio of land cost to building cost is often much higher in other types of profitable real estate development.

The profitability of very tall structures also requires reexamination. It seems ludicrous to suggest that these buildings are unprofitable, but this may in fact be the case in a number of projects. Their profitability depends on a delicate balance between the prestige of the building and the rental market. In many cases the buildings cannot be leased as quickly as expected or inducements must be offered to encourage leasing in such markets as the present one. In the opinion of a number of real estate developers, this is the situation in a majority of Houston projects built in the last ten years.

Such factors as these should discourage the proliferation of tall buildings in a free-market economy. Ironically, however, the tax system allows the loss of the building to be transferred to another financial entity to offset a tax liability. The loss may actually be "sold." The reasoning behind this provision is somewhat complex; the mechanism is intended to stimulate the building economy, functioning like the mechanism of depreciation. Once again this suggests that these very tall buildings are not the inevitable product of the real estate economy but are surprisingly subjective ventures, unwittingly institutionalized by, among other things, the tax system.

Other Issues

There are a number of issues that relate to personal satisfaction and productivity that we have not touched on. Perhaps the most important of these is the question of whether office workers experience psychological dislocation in tall buildings. There are a number of studies that indicate that people do become disoriented in high-rise buildings. They cannot easily distinguish what floor or even what side of the building they are on. Tinted glass tends to make it difficult to read outside weather conditions, further adding to this sense of dislocation.

While productivity has not been tied directly to this, studies indicate that workers choose, in overwhelming numbers, to work in lower buildings after working in high-rises.[12] So at the very least, there is a question about the fitness of high-rise building for the workplace that must be considered.

The Density Argument

One of the most often expressed arguments for tall buildings is that they are necessary to achieve density, and that the alternative is uncontrolled urban sprawl. This argument contains two implicit assumptions: that high density cannot be achieved with mid- and low-rise building and that the only alternative to the concentric city is uncontrolled and counterproductive urban sprawl.

The density argument depends first on establishing standards of acceptability. For this reason it is useful to compare the densities of existing cities. The densities of the core areas of Tokyo, Hong Kong, Peking, and Shanghai are all nearly equal or are slightly in excess of New York (800 persons per acre). Paris, London, and Rome have densities only marginally less than New York (650 persons per acre). Among these cities only Tokyo and Hong Kong have a high preponderance of tall buildings. Peking and Shanghai have almost no high-rise building and very high densities are achieved. In the United States, Washington, D.C. and Philadelphia have building-height limitations and still achieve densities within 75 percent of New York. Of course, there are tremendous differences in living patterns and space standards between Asian and European cities and between European and American cities. However, it is clear that high density can be achieved with a high level of amenities without tall or very tall building.

The concentric density argument is inherently more complex. According to this view, a city requires a core or center of appreciably higher density that its surrounding parts. This point of view is based on, among other factors, a reaction to suburban sprawl and a respect for the patterns of the traditional city. The argument, however, may be slightly simplistic. Whether the physical form of the traditional city is appropriate to the scale of population being housed in cities at the present time certainly is open to question. A detailed examination of cities like Paris, Rome, and London indicates that a more appropriate model may be a high but relatively uniform density with subcenters formed around such institutions as universities, churches, and markets. A considerable body of planning theory also has developed around the concept of a more dispersed city linked by transportation and communication. Frank Lloyd Wright's Broadacre City is only one early example. Auguste Perret, LeCorbusier, and others explored this concept as well. The implicit weakness, however, always was a rejection of the traditional city. Network plans never were seriously proposed as the more correct, scaled-up version of the traditional city. Most recently, however, the dispersed model of the city has received attention as an energy-related planning consideration. The argument here has to do with taking the entire dwelling-workplace environment into account. Over 50 percent of the total fuel consumption of the U.S. is generated by transportation whereas only about 10 percent is consumed by buildings.[13] The amount of energy consumed in individual buildings is negligible compared to the energy consumed in driving to and from the workplace in a city like Houston. A more energy-conscious planning approach might distribute commercial subcenters in order to reduce commuting time and thereby conserve fuel.

Conclusion

What patterns of development and building, then, might a more resource-conscious point of view support? In terms of the city, a more dispersed planning strategy emphasizing subcenters as opposed to a single center should be considered. In the City of Houston, the policy of allowing unrestricted utility connections in the downtown area only and the Metropolitan Transit Authority plan that focuses the system exclusively on the downtown area might be reexamined and modified to support growth in both the central business district and such existing subcenters as the Galleria, the Medical Center, and the Energy Corridor.

In terms of the individual building, there may be viable alternatives (with fewer negative environmental consequences) to very tall buildings to house large institutions and create memorable images. The model that has developed in other cities, where building height was limited by technology or convention, is the building complex, characterized by its developed outdoor or public space rather than its sheer size or bulk. The Galleria Vittorio Emanuele in Milan is an example of an enclosed street that gives access to some 250,000 square feet of interconnected commercial space. The architecture of the linkage system, rather than of the buildings, is memorable. The space has been used continually for almost 100 years. The relatively low-scale structures around such spaces can be serviced easily, accept changes of use, and inherently are more economic to build and operate. Modern communication techniques allow these spaces to be linked as efficiently as the vertical configurations. The distribution of density tends to support rather than abandon the commercial life of the street.

To take an extreme example, it can be demonstrated that the density of downtown Houston could be housed in a city limited to nine floors by increasing the area of the CBD by only 30 percent, and this provides for atriums or landscaped areas in the center of each block. It also can be demonstrated that the land cost averaged over such an area would be equal to or less than the land cost incurred in building at higher density on less area.

While no one in Houston would seriously propose a limit of building height or propose any fixed optimum, it is clear that both with regard to building type and urban development that our present models are far too limited. It also may be true that these limitations unwittingly are being institutionalized by municipalities, causing serious consequences for the future.

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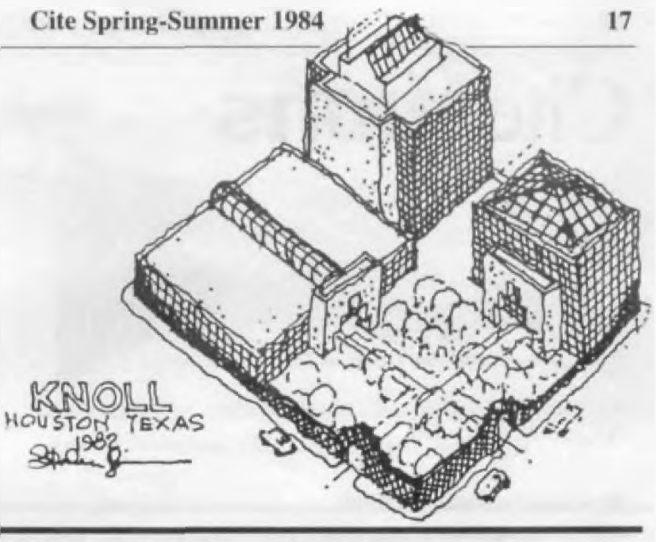
Sketch by Stanley Tigerman



Knoll Building, Houston

Janet O'Brien

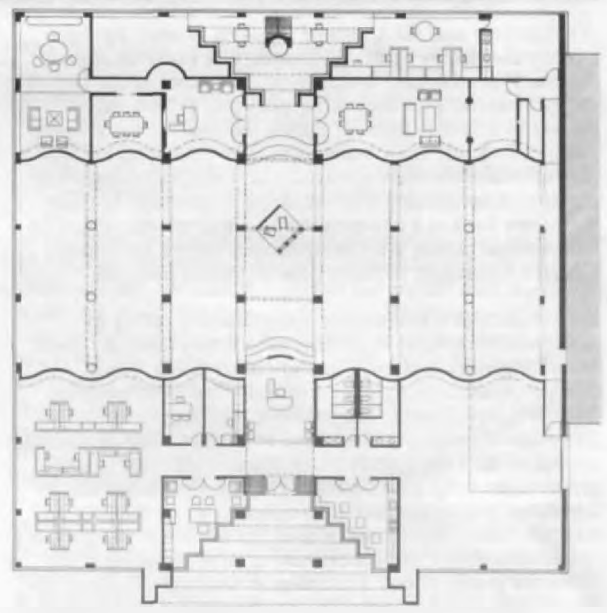
The opening of the new Knoll Building Houston was heralded by hundreds of pink and purple cherubs. Large-scale versions of architect Stanley Tigerman's cartoons "flew" in the newly planted trees. These were impermanent, however, and the completely remodeled 65-year-old structure at 2301 South Main Street is a building worthy of the teaming of an original talent and an exceptional client.

The Knoll Building is the first stage of a master plan to develop the entire city block that Knoll owns. Knoll's move to the South Main section of the city can be seen as an investment in a worn area of Houston, a vote of confidence in the area's revitalization. It also reflects a decision to stand alone, apart from any design center.

As a matter of policy, no Houston architect was considered for the commission, according to Jeffrey Osborne of Knoll New York. Knoll did not want to risk offending any of its local clients by choosing among them. However, Ray B. Bailey Architects were selected as associate architects and supervised the construction.

Knoll has represented high design from its inception, having promoted such talismans of modernism as Mies's Barcelona chair and Saarinen's pedestal table. Begun as a manufacturer of furniture to accompany great architecture, Knoll is now in the position to commission the architecture as well. The choice of Stanley Tigerman of Tigerman Fugman McCurry was made by Stephen C. Swid and Marshall S. Cogan, co-chairmen of the Board of Knoll International. In keeping with a tradition established by Gwathmey Segal and Venturi, Rauch and Scott Brown, who designed the Boston and New York showrooms, respectively, as well as furniture lines, Tigerman will have the opportunity to place his own furniture designs in the showroom.

The first impression of the one-story building is not overwhelming. The building's skin of clear-and-translucent glass is articulated by a red grid, broken only by the pediment of the recessed entry. The same pediment is repeated, free-standing, at the entry to the surface parking lot, implying a much larger building.



Above: Knoll Building, Houston, 1984, Tigerman Fugman McCurry and Ray B. Bailey, architects (Photo by Paul Hester) Right: Floor plan (Tigerman Fugman McCurry)

The impression upon crossing the threshold is one of restraint, even elegance. From the entry, the cross axis leads to offices, kitchens, and restrooms. Playful black, cloud-like plant stands and drinking fountains flank this path. Directly ahead, terminating the main axis, however, a golden statue of Arachne beckons. It is the highlight of the textile area. According to Greek mythology, the mortal Arachne challenged Athena to a weaving contest. Her tapestry was of such perfection that the enraged Athena destroyed it and transformed the girl into a spider, doomed to weave forever. The visitor, moving towards the statue along the skylit galleria, descends several steps to the showroom, which opens up on either side.

As Tigerman states in his book *Versus*, "It is perfectly possible in one building to have a dialectic between the Platonic striving for perfection and the perverse desire to rupture that very perfection in order to represent the frailty of the human condition." The showroom represents such a rupture in the old building. Marked by two undulating walls, it is as if a solid block were compressed, then torn apart, forming a void that is the showroom, the heart of Knoll. It is here, where the visitor is thrust onto center stage like a fashion model on a runway, that the "spectator becomes the performer" and the furniture sits mute, watching. Traces of the quake that revealed the showroom in the previously nondescript building can be found in the progressively greater span between columns in the colonnade, the spacing of black bands in the white terrazzo, and the changing size of the columns themselves. The large trusses that span the galleria are remnants of the existing structure, clad in new drywall.

The showroom is not the whole story. Continuing along the center aisle the visitor rises to meet Arachne, clearly not cast from a Tigerman drawing. Here Knoll textiles are organized in a grid of black boxes — an early Knoll innovation that has become a trademark. The offices and conference room are less conceptually charged than the showroom, but equally sophisticated, as if Mies had teamed up with Mackintosh. The wit is tongue-in-cheek — a standpipe is left exposed in the center of an office and painted bright yellow, the men's washroom is pink while the women's is blue, and a phone booth with a red interior is added in a large open office for intimate conversations.

Tigerman, however, is worried: "Everyone at Skidmore likes it, it was on budget and on time. My reputation is ruined!"

The Centre

Sam Seymour

The Farb Companies recently completed its first retail development, a strip shopping center on Bissonnet near the Southwest Freeway. Now The Centre stands in near-perfect isolation, with only a single high-rise office building in the background. In 10 years, if the Farb Companies develop the entire 72-acre tract according to designs prepared by the Houston office of Skidmore, Owings and Merrill, the shopping center will form a gateway marking the principal entrance to a high-rise office park containing some 4 million square feet of space. The newly completed shops represent only the first phase of this ambitious program.

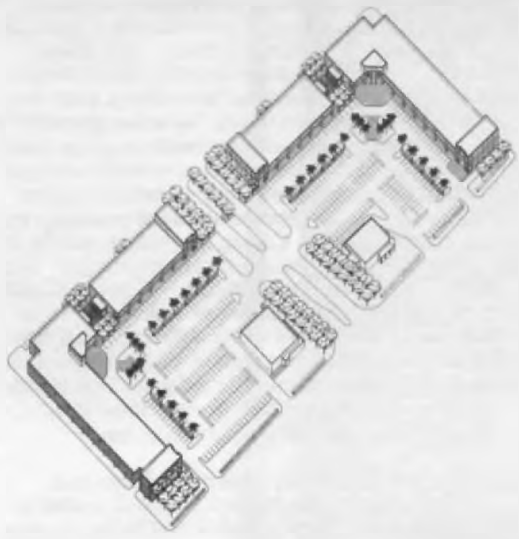
While the current market for suburban office space is soft, and the Farb Companies' projections seem optimistic, a second tower and an ornamental lake located at the freeway end of the site are definitely planned. The main streets are in place: the city is widening Bissonnet, and the state is transforming Roarke Road into Beltway 8 in anticipation of greater traffic flow. The developer's venture into the retail trade and its expansion plans demand consideration not only on their own merit but also as a built fragment in the overall urbanization of southwest Houston.

At first glance, the gleaming white strip seems an apparition of fashionable elegance (read "the progress of taste") in a generally drab area of the city. The building, however, is essentially a straightforward manipulation of the strip center type, so rigidly defined in architectural and economic terms. While the developer gave the project designer Craig Hartman, of Skidmore, Owings and Merrill, a fairly free hand in the design, he was directed to adhere to the advice and recommendations of the retailers themselves. According to Hartman, three criteria prevailed: parking, sight-lines, and universal space.

The parking goes without saying, a major determinant in any Houston project. Retailers prize their visibility and want to be seen not only from the surrounding roads, but also from the parking lot itself. Universal space makes the world safe for marketing: it accommodates expansion (and contraction) and allows for the changing needs and configurations of marketing and display. The retailers, while largely indifferent to the subtleties of design, were convinced that a 5-foot module and a 30-foot structural bay permitted optimum planning flexibility.

At the scale of the site, geometry and convention imposed limits on the possible layouts of a strip shopping center. Hartman found that in Houston a corner site was typically developed with an L-shaped plan embracing the intersection. True to type, Skidmore, Owings and Merrill's plan, though shaped like a U, is cut down the middle by Centre Parkway, forming a gateway of two L-shaped halves.

Rather than as an experiment in type, this shopping center succeeds in the way it develops and articulates the important



The Centre, axonometric above, 1983, Skidmore, Owings and Merrill, architects. (Photo below by Paul Hester)

public elements of such a scheme — the long corridor that ties the individual shops together and the general massing of the composition. The colonnades that seem so gratuitous and flimsy on the strip centers of Post Oak Boulevard (visit the Weingarten Center at Post Oak and Westheimer; 1959, W.G. Farrington Company, architects) are transformed at the Centre into porticos modulated by five-foot plaster-and-lath piers. The visitor is protected from the sun, wind, and rain, both physically and perceptually.

Where the buildings end or turn, the disposition of spaces in the portico and the general massing changes. At the interior corners Hartman develops high empty lanterns. The ends of the major building units are marked by double-height retail spaces with provisions for mezzanines. Although double-height stalls are historically associated with shops off porticos at least as far back in time as Trajan's Markets in second century Rome, Hartman says he met with resistance from the retailers on both the double-height spaces and the design of the wide portico piers.

Retailers felt that mezzanines would be difficult to oversee and were concerned that the protected nature of the portico provided by the piers and their corresponding pilasters would reduce the desired visibility. Regardless of these functional concerns, the architectural effect is convincing. While some individual identification is lost, the total image is strong. Moreover, the portico makes a pleasant place to take a stroll, browse, or shop — even with its inevitable parking-lot view.

The success of this strip is attributable, in part, to the role The Centre's composition plays in the developer's and architect's plan. This shopping center incorporates both the strong image necessary for an office park projected towards the city and it is identifiable as a shopping center. The present buildings and the parking lots they enclose make a monumental, symmetrical vestibule for the development, a *cour d'honneur* for the offices beyond.

With the exception of a 400-room hotel, this retail *cour d'honneur* constitutes the only non-office space in the development. Yet the projected segregation of offices from retail functions may belie the intended urbanity of the site. The walls of the *cour d'honneur*, the shopping strip, may only represent an empty *poché* to be filled with specialty stores. The overlap of functions and building types which marks a healthy urban or suburban scene is missing. A more integrated scheme with shops below and offices above, like the River Oaks Community Center (1937, Oliver C. Winston and Stayton Nunn-Milton McGinty, architects), was tested by the developer yet found not to be viable. The probable return, when compared to the construction and maintenance costs of the more complex building type, was insufficient. One might wonder why people want to have their offices removed from businesses and shops that could conveniently serve them.

By all accounts the Farb Companies are interested in introducing intelligent architectural design into southwest Houston. Its first strip center is an elegant and thoughtful development of a major type of retail building in suburban Houston. Skidmore, Owings and Merrill's design is carefully considered; the porticos harbor the urban potential of *dolce far niente*. The way this strip functions, however, without offices or any other real continuity of inhabitation, begs the question of just how much significance a parking lot will bear.

Citeations

Architecture and the Crisis of Modern Science

Alberto Pérez-Gómez, Cambridge: The MIT Press, 1983, 400 pp., 87 illus., $30.

Reviewed by Bruce C. Webb

Architecture and the Crisis of Modern Science has been eagerly awaited by many in Houston who know its author, Alberto Pérez-Gómez. It was the good fortune of the University of Houston's College of Architecture to have Pérez-Gómez as a faculty member during the time he was revising and polishing the book's manuscript. He is a remarkable and insightful teacher who has the rare ability to give shape and clarity to a design idea without losing its essence. In many ways, this book is a continuation of conversations shared by students and faculty with Pérez-Gómez before he went to Carleton University to direct its architecture program.

For an age which has become accustomed to taking its dialogues and lessons in architectural theory (and just about everything else) in simpler and smoother doses, Pérez-Gómez's book is likely to be a difficult and even troubling feast. It is a profoundly serious book which stretches across 200 years of architectural history, from the advent of modern science in the 17th century to the beginnings of the modern period in the early 19th century. The history reaches deeply into its subject and arrives at its conclusions by the long and scholarly route. But plotted within this historical narrative is a more impassioned and deliberately critical appraisal of the modernist predicament, a situation in which architecture has lost its ability to reconstruct in any meaningful way the relationship between science and myth. The historical context within which architecture is discussed is presented as a relentless process by which science and mathematics came to be understood as tools and techniques which now dominate present architectural theory and practice rather than as sources of revelation. While the historical narrative is rich and thick with details, it coalesces at many points along the way with extremely powerful and even poetic insights.

Pérez-Gómez argues that modern architecture and the crisis of meaning it faces has roots in a historical process touched off by the Galilean revolution in which science and the scientific method created a radical reorientation in how the world was to be viewed. The epistemological framework from Descartes forward split the problem of knowing into subjective and objective questions, concentrating attention on the latter where the scientific method could create the illusion of certainty. The inability to reconcile these two dimensions of thought — the formal or syntactic with the transcendental or semantic — has enormous implications for architecture.

During the 18th century, truth came to be regarded not as what could be perceived, but rather as what could be conceived with mathematical clarity. Scientific theories of the time were neatly reconciled with religion through various deistic notions which proclaimed God the "Great Geometer" and made a religious quest out of the scientific method. The subsequent ascendency of this method in the 19th century in every sector of western thought brought about a questioning of the conceived relationship between number, geometry, and the divine. Finally, a total separation of faith and reason into two unequal and distinct dimensions of thought occurred.

While the book revolves around the issues of scientific analysis and poetic reconciliation, this is not another of those dualistic struggle books, like Wojciech Lesnikowski's *Rational and Romanticism in Architecture*, which tries to reshape the concept of history into a simplistic struggle between symmetrical opposites. Instead, *Architecture and the Crisis of Modern Science* moves more intricately, treating not only the ideas that fit the book's argument but also the ambiguities and complexities that make the situation discussed so difficult. If the historical analysis seems inordinately complicated it is because Pérez-Gómez has dealt fairly with his historical personae, treating them not as straw men but as enormously complex individuals. The story here is less one of opposite camps locked in a proto-human struggle than a portrayal of an evolving architecture. Caught in a powerful current of shifting values and methods, the historical characters are trying to make some sense through architecture of their situation. Against this background, Pérez-Gómez portrays the decline in the semantic dimension of architecture.

Much of the book's history explores architectural ideas first manifested in the royal academies of France. Some relatively obscure or overlooked figures such as Bernard Palissy, who investigated the mythical dimension of the Baroque geometrical garden, are examined. Better known figures like Claude-Nicolas Ledoux and Etienne-Louis Boullée, who "transformed theory into poetry and coherently synthesized the dimensions of *mythos* and *logos*," are reinterpreted in the light of the book's argument. Subsequent chapters recount developments in the technical instruments of architecture, including mensuration, stereotomy, statics, and strength of materials ultimately leading to "scientific building" and to J.N.L. Durand, an influential professor who taught at the Ecole Polytechnique at the turn of the 19th century. This architect bundled together the rational baggage of his predecessors and emerged as the final link to functionalist modernism.

Durand established a theory of architecture that was pure technique. Using the Cartesian grid as an ordering system and discarding the symbolic connotations that surrounded number and geometry altogether, Durand formulated a method for making architecture that brought together the growing knowledge of construction science with rational plan making. Durand's emphasis on functional planning provided a clear separation between the Ecole Polytechnique and the Ecole des Beaux-Arts, which maintained a tradition of romantic formalism. In an age that was beginning to witness the triumphs of technical and scientific know-how, the practices espoused by Durand were understandably well received. By demystifying architectural design, by making it into a technical rather than a poetic activity, Durand was able to merge with the spirit of his age, an age that was seeing its most spectacular works directed not be architects, but by engineers. Prince Albert, the Prince Consort of England, was said to have observed, "If we want any work done of an unusual character and send for an architect, he hesitates, debates, trifles; we send for an engineer and he does it."

The last chapter of the book — on Durand and on Charles Francois Viel's subsequent critique of Durand — is particularly illuminating in light of Durand's pivotal role in providing a foundation for modern architectural theory. Viel, whose work was largely ignored as being reactionary in his own time, was a vociferous critic of Durand and his methods at the Polytechnique. To Viel, the students of this "systems approach" to architecture were neither well-versed as builders nor as artists; in reducing the problem of building design to studio exercises of recipes plotted on gridded plans, they understood neither the real issues of construction nor the historical principles that informed and guided great art. Calling the students and faculty at the Polytechnique "the physicomathematical faction" and "the engineers of the Ecole Polytechnique," Viel condemned Durand for reducing the understanding of architecture to the lowest common denominators of speed, efficiency, and function. In view of the elaborate character of Viel's criticism and the subsequent emergence of Durand's influence over modern architectural theory, it is not difficult to understand why Durand is remembered and Viel is nearly forgotten.

William Barrett, in his book *The Illusion of Technique*, covered similar ground by showing how the ritual content of technique has been systematically assimilated by the structure of modern technology. Barrett, like Pérez-Gómez, argues that philosophy is the historical source of technology in the modern sense. Barrett's critique is for philosophy, whereas Pérez-Gómez takes these issues outside the realm of pure thought and uses them to reaffirm the historical position of architecture as a mirror of ideas. In doing this he has also taken architecture outside the social dialectic that surrounded and helped to shape architectural theory in the modern period. The attempt to link architectural theory with various political or economic ideologies is so fraught with dead-ends and contradictions that one can hardly blame the author for not digging into this can of worms. It is clear that the book resists this kind of speculation as symptomatic of the crisis. The results of which are usually capitalist formalism or Marxist rationalism, both of which turn architecture into empty propaganda and its theories into justifications.

The larger issue considered here is philosophical and the argument is perhaps easier to make for the general case, i.e., for philosophy, than for architecture. Because it is a reality of ideas rather than an idea of reality, architecture is inextricably bound up in a much broader spectrum of issues and constraints than the book seems to acknowledge. But Pérez-Gómez has clearly accomplished what he set out to do as a historian — to tell us the history of how we got to where we are.

Pérez-Gómez's "Theoretical Sequel" acknowledges some hope in the Romantic dreams of Lequeu, in Gaudis "edible architecture," in Kiesler's Surrealism, and in movements like Art Nouveau and Expressionism before concluding that "truly meaningful architecture has been, by necessity, the exception rather than the rule over the last two centuries." The sequel further cites the success of contemporary phenomenology in helping to indicate the failure of technology alone to come to terms with the fundamental problems of architecture, stating, finally, that "the reconciliatory mission of the architect is poetic." This statement recalls the similarly challenging conclusion of Christian Norberg-Schulz's *Existence, Space and Architecture*. But where Norberg-Schultz attempts to spell out the terms and the structural "grammar" of the poetics of dwelling, Pérez-Gómez has provided the historical sources of understanding from which we are to construct our own poetic reconciliation.

There are two small but annoying points of criticism about the book's design. First, the footnotes are inconveniently located at the end, making it difficult to connect them with the text. While this is a minor matter for the source notes, it is a real problem for those notes which expand on points in the text. It would have greatly enhanced the readability of the book if the latter could have been placed at the bottom of the pages to which they refer. Second, the text is accompanied by a number of archival illustrations that are extremely interesting. But the textbook format has restricted the size and the quality of the reproductions, often diminishing their usefulness. In most instances, the illustrations would have benefited from more detailed and generous explanatory captions. There is not the level of integration of text and visual material one would hope for in a book of this type. Illustrations are treated somewhat indifferently, more I think by the publisher than the author, a real disappointment given the potential value of these illustrations as a primary, historical resource.

I suppose *Architecture and the Crisis of Modern Science* might attract a wider and more popular audience if it had developed its argument more in the arena of contemporary effects and implications than through a historical perspective. And I suspect that many people will come to know the central ideas in this book through the writing of others who will do just that. Richard Sennett in his little book, *The Uses of Disorder*, for example, was able to construct a valuable and extremely relevant critique of modern planning with its emphasis on theories of scientific analysis and predicative tools rather than the transactions of real life. I am certain that in the next 20 years we will be wrestling with the problems of shifting paradigms and values. The issues and ideas covered in *Architecture and the Crisis of Modern Science* will have to be dealt with. Hints of this have begun to appear around the edges of every discipline with a conscience, including the sciences. Given the eroding process by which ideas gain popularity, it is good that we have at hand a book so well thought out, so carefully researched, and so uncompromising to return to.

Citeations

Jules Guerin: Master Delineator

Farish Gallery, Rice University
Sponsored by the School of Architecture, Rice University
10 October – 4 December 1983

Reviewed by Peter Holliday

Lincoln Memorial, 1912, Jules Guerin, delineator

Although "Jules Guerin: Master Delineator,"[1] emphasizes architectural renderings, the exhibition and catalogue also reveal other aspects of this man's multi-faceted life and career. Guerin as illustrator, muralist, and perhaps most importantly, visionary of the City Beautiful movement are all explored. As a result, the viewer not only came away from the show with a keener appreciation of the artist, but also left with a better understanding of the complex nature of architectural rendering.

Mark Hewitt, assistant professor of architecture at Rice University's School of Architecture, outlines what is known of Guerin's training and early career in the introductory essay to the catalogue. In Paris before the turn of the century, Guerin studied the handling of monumental academic subjects as well as the problems of small-scale composition and watercolor illustration. The latter training led to his first steady work for *The Century Magazine*, a commission secured through his friend Maxfield Parrish. The Farish Gallery exhibition demonstrated this phase of his career with a selection of his 1904 illustrations for "The Chateaux of Touraine." The majority of works shown in the exhibition, however, were his more famous architectural perspectives.

This type of architectural rendering grew in importance during the 19th century, especially in England. Such renderings emphasize the qualities which distinguish the architecture of that period. They illustrate texture, color, the nature of site and placement, scale, detail, and ultimately a sense of the Romantic and the Picturesque. Such renderings give us an artist's impression. These are not the mathematically precise diagrams of an engineer.

In his 1912 book, *Architectural Drawing and Draughtsmen*, Sir Reginald Blomfield made clear the role of architectural renderings at this time. "A difference at once presents itself in architectural drawings according to the intention with which they are made. This intention may be either objective or subjective; that is, the intention of the draughtsman may be either to make drawings which can be carried out in the building by other hands exactly as drawn, or, on the other hand, he may wish to produce in somebody else's mind the impression of the building as a whole as he conceives it, or he may employ architectural forms as the symbols and embodiments of some abstract idea, the imagery of a world which has never existed in fact, and never can."[3]

The best art of Jules Guerin, according to these definitions, is subjective. His are not the plans, elevations, sections, or geometrical working drawings used to convey precise information to the builder. Geometrical drawings are abstractions, diagrams as opposed to views of the completed work. While the architect can interpret such abstractions, the public cannot. Guerin's renderings form a bridge between the architects for whom he worked and their clients.

The success of Guerin's perspectival renderings depends upon his skill, imagination, and honesty. Yet herein lies a paradox. Ever since the rules of perspective were worked out in the Renaissance, it has been known that perspective is never truly honest; a convincing impression depends to a certain extent upon artistic license. The artist must manipulate the rendering so that the eye will take in more than any "true" perspective drawing or photograph.

The English architect R. Phené Spiers appreciated this in his influential book, *Architectural Drawing:* "The objects to be attained in preparing a perspective of a building are, firstly, to assure the designer of the correctness of his intention with reference to his design; and, secondly, to convey to a committee or the public some idea of the ultimate effect of the building when executed. It necessarily falls short of this, because it demands one fixed point of view, and anyone looking at a building is not content with that but carries his eye from one end to the other, and looks at it from many points of view. The public, as a rule, also fails to estimate correctly from a drawing of any description the proportion, mass, or scale of a building; and, unless the drawing be actually looked at from the selected station-point, the proportions at the extremities of the picture are apt to appear distorted."[4]

According to this quotation, a perspectival rendering thus is made in advance of the actual construction of a building. The drawing is a representation of something that does not yet exist. A 19th century Picturesque license thus lies behind Guerin's masterfully correct perspectival renderings. (Note the Barbizon School color scheme, subject matter, and composition of the watercolor painting *Rural Scene*; cat. no. 1.)

The Picturesque emphasized the importance of the building in its landscape, the very thing which could not be conveyed by geometrical elevations. With the Romantic taste for the sublime, form and mass grew in importance. The inspiration of Neoclassical compositions was felt, including the influence of Piranesi, whose richness of tone and depth gave added drama to his renderings of the ruins of Rome.

In his early topographical view of the *North Canal and Portal of Agriculture Building, World's Columbian Exposition* (ca. 1893, cat. no. 2), Guerin indicates the artistic direction of his work. He places the portal at the edge, emphasizing the grandeur of the buildings and the boundless vistas. Guerin also made realistic pictures where no solid, three-dimensional reality existed. In his *Fountain Basin, North Facade: St. Louis Art Museum* (cat. no. 4) Guerin placed the focus of the composition beyond the building itself. As Hewitt points out, the unorthodox and Picturesque point of view stresses the monumentality of the building and its setting.

By the beginning of the 20th century, architects were anxious to secure perspectivists of the highest quality, and Guerin was one of the most capable working in America. Hewitt has done the architectural and scholarly communities a service by having mounted the first exhibition of the work of Jules Guerin. However, the extant scholarship on Guerin is scant, and further work needs to be done to establish securely his unique contributions to the history of architectural delineation. One looks forward to future works about Jules Guerin.

Notes

1. Mark A. Hewitt was guest curator of the exhibition and prepared the catalogue.
2. Gavin Stamp, *The Great Perspectivist*, London, Royal Institute of British Architects, 1982, 7-9.
3. Sir Reginald Blomfield, *Architectural Drawing and Draughtsmen*, London, 1912, 5.
4. R. Phene Spiers, *Architectural Drawing*, London, Cassell and Company, Ltd., 1887, revised edition 1902, 23.

Critics on Criticism

The Role of the Press/Criticism in Architecture

(Photos by Michael Thomas)

edited by John Kaliski

On 25 January 1984, The Rice Design Alliance, with the support of the Houston Chapter of the American Institute of Architects, Mr. and Mrs. Gerald D. Hines, Robert and Steve Lev, and Moody-Rambin Interests, sponsored a symposium titled The Role of the Press/Criticism in Architecture at the Museum of Fine Arts, Houston. A sold-out Brown Auditorium witnessed an at-times heated debate where the panelists matched intellects and wits under the guiding presence of moderator Peter Papademetriou, professor at the School of Architecture, Rice University, architect, and critic.

The symposium panel was composed of both local and nationally recognized critics and writers and included Peter Blake, former editor of Architectural Forum, *author, and present chairman of the Catholic University of America Department of Architecture; David Dillon, architecture critic for the* The Dallas Morning News, *Diane Ghirardo, Texas A&M University College of Architecture professor and editor of the San Francisco design journal* Archetype, *Joseph Giovannini, design reporter for the* New York Times, *Ann Holmes, fine arts editor of the* Houston Chronicle; *Pamela Lewis, design writer of the* Houston Post; *and Suzanne Stephens, an editor at* Vanity Fair *and the evening's keynote speaker.*

Stephens began the symposium with an address which outlined some of the problems of architectural criticism, presented a brief history of architectural discourse in the United States, and provided examples of conflicting evaluations of historically important structures by well-known architects. According to Stephens, much of what passes for criticism today is in fact little more than descriptive writing of buildings and places. On the other hand, she noted that criticism which takes a rigorous intellectual tact too often degenerates into blind ideological gesturing which prevents the critic from evaluating the building on its own material terms. While it is not helpful or educational for the reader to describe a building as merely "good," "pleasant," or "wonderful," this writer stated that it was equally mystifying to the reader if the critic hid behind ideological smokescreens which require indoctrination into the world of architectural buzz words, rhetoric, and theory.

In summing up her talk, Stephens outlined the questions she felt critics should ask and the criteria she used in evaluating the built environment. First, what are architects' intentions when they design a building and how do their experiences of their completed buildings differ from that of everyday users? Second, how does a building stand up to use over time? Shouldn't there be more evaluation of buildings long after they are completed? Finally, Stephens pointed out that a piece of criticism is only as good as the questions the critic chooses to ask. "Why," she said, "is not a bad place to start." Suzanne Stephens ended her talk on a more philosophical note. "[Criticism of architecture] holds up for a time, then it drops away, then it comes back again like all assessment . . ."

Peter Papademetriou, in his role as moderator of the panel, next elaborated on some of Stephens's points and introduced another idea which later in the evening became a point of dispute. Papademetriou claimed that there is an increasing momentum to report everything and anything. However, along with this voracious appetite for news for the sake of news goes the danger of a superficial treatment of the subject matter. Papademetriou kept bringing the evening's conversation back to this idea and at the same time attempted to focus the panel's talk on some of Stephens's points. As the following excerpted transcripts show, the symposium, while not always totally focused, was pithily educational. — J.K

Papademetriou: Let's start with the issue of readership. What kind of readership does one find in architectural criticism? Who is the market, how might it be addressed, and how do you hone those differences?

Blake: When I was the editor of *Architectural Forum*, we initially belonged to Time-Life. Time, Inc. believed in big circulation. We had about 40 thousand architects and related design professionals, and about another 50 or 60 thousand people who were somewhat knowledgeable about architecture and building, but were not architects. The readership was very broad. One of the problems I had at *Architectural Forum* (and later *Architecture Plus*) was that most of the people who contributed were architects or architectural historians who were basically illiterate. I mean they just couldn't write, they couldn't communicate. I don't know whom they communicated with. I think they communicated with each other. Sometimes Peter Eisenman would communicate with Ken Frampton, and Ken Frampton with Peter Eisenman. It was a rather small group, you see. My job really was to try and translate this verbiage into something that the average, reasonably well-educated reader could understand. The first thing you have to do when you're talking about architecture is to try and talk in a language that is reasonably widely understood — like English, for example — as opposed to the kind of language spoken at some of the academic institutions we're all familiar with. The next problem is that architectural journalism tends to fasten upon events, things, buildings when they are brand new. Yet how can you evaluate a building at that stage? Most critics, I've found, tend to look at architectural criticism in a way they might look at drama criticism or criticism of a painting or a sculpture. Once you see a thing or listen to a thing or see a performance of a play or listen to its music, it is the finished event. But a building is not finished at all when it's completed, it needs to be occupied, and it needs to be used, and it needs to be evaluated. And then, maybe five or ten years later, there is something that can be said about this building. There is no architectural criticism that really looks at buildings the way normal people — people who use them, people who live in them, work in them, live next door to them, look at them when they go to work — look at them. Most buildings are evaluated in purely aesthetic or art historical terms by critics who don't seem to be interested in the way buildings are used at all.

This is one of the areas in which there is a breakdown between a critic and his or her public. Magazines and newspapers are in the business of news. They must publish something the moment it's fresh and new and exciting and newsworthy; they're bored five minutes later. They are not interested in how a thing works. And architecture is, after all, only about 50 percent art, and perhaps 50 percent use, shelter, a place to live, a place to work. And that is where a division has developed between "public" architectural criticism — which is immensely interested in the use of a building and the way it

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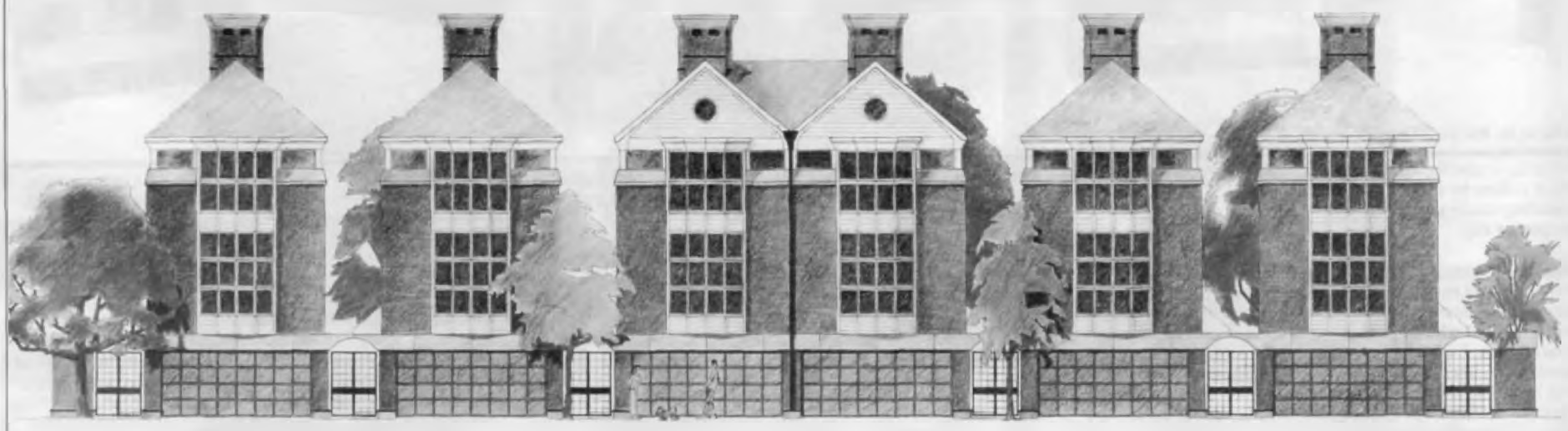

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performs — and the kind of criticism that most of us see — which is done by people who perhaps don't really care whether a building works or not. They just care about the way it looks on opening day.

Ghirardo: Although there is a place for reporting what's being built and for talking about the way a building looks in a particular environment, most architectural criticism evades the central issue of who's building what, where, and in whose interest. In fact, I would argue that all architectural criticism (or almost all architectural criticism) fails to ask who is building what and why. If you ask questions about the way a building looks, you can have infinite arguments; people will argue indefinitely about the formal qualities of the building. It's very easy to do that. It's very difficult to antagonize possible advertisers; it's very difficult to antagonize developers, real estate interests, or architects who turn around and say: "I have to put food on the table. If you criticize this project, I'm not going to get much business if you rake me over the coals." What we're avoiding is the responsibility of the critic to educate the public about the things that are being built and their impact on the community.

Changes in our urban environment over the last 30 or 40 years have not been positive, and many of them have gone unremarked and unrecognized until it's too late. In San Francisco, for example, the Embarcadero Freeway stops just beyond the Ferry Building, which used to be a major center. Now it's shoved off to one side of a freeway that ends in the middle of the air.

It's very difficult to undertake this kind of criticism; it's not popular. Newspaper editors immediately get calls asking "Who is this person you have writing for you who's saying these things." There is informal pressure from social contacts, pressure from advertisers, and finally from people who simply say "we'll sue if you print this." What the critics essentially do — I'm taking a fairly polemical position — is pander to those interests, pander to the unwillingness to confront the problems of buildings that are inhuman in scale, that disrupt functioning neighborhoods, that don't express human values.

Papademetriou: One of the issues we ought to touch on is the difference between the critic versus the reporter: the old dialectic between being a beacon to, or a mirror of, society's values.

Giovannini: Before going to the *New York Times*, I wrote for *The Herald Examiner* as the architectural critic and urban design critic in Los Angeles. For four years I found there, as I find in New York, that you have a couple of readerships: the lay readership and the professional readership. But in addition to that, you have the demands of the publication. I have written for a number of publications besides *The Herald Examiner* and the *Times*. I've written for *Architectural Digest* and *Skyline*, and within the *Times* I've written for the magazine, for the "Home Section," and for the "Arts and Leisure" pages, all of which are very different venues and have different requirements. I can bring the same perceptions to the same object, yet discuss them in five different ways.

From the point of view of a writer, it's very interesting to take a different posture and express myself in a different voice. One of the things I especially like to do is to discuss buildings as cultural artifacts in very broad terms. I am trained as an architect, I like to design, I am interested in formal issues, but I also like to write very broadly, to interpret the meaning of a building in a much fuller way. I think that a newspaper has a certain responsibility — as an institution of the city — to protect the city. As a critic you write in a protective capacity because it is *your* city and there's nobody else who's going to comment on it. At *The Herald Examiner*, I never once was reprimanded for taking a strong stand. It's quite possible that since the owners lived in San Francisco they didn't care what happened in Los Angeles, and had I been at *The Los Angeles Times* it might not have been the same. I think that the printed media have a certain reality and momentum that is unique.

To the extent that (especially in the glossy publications) architects do design for the photograph, I found myself occasionally thinking, "how would this look in a photograph; on a printed page?", and forgetting the fact that there's a built reality there as opposed to the photographic reality. For a lot of people there are two sites of a building — the printed page as well as the piece of land. I like writing for newsprint media because it de-emphasizes the photograph in favor of the printed word. I'm not saying that appearance is not important; it just shouldn't be dominant. In a publication like *Architectural Digest*, the gloss of the whole presentation is so dominating that the pictures set up a competitive relationship to the text.

Papademetriou: Another question is: Can newspapers sustain full-time criticism? When does a newspaper begin to dedicate a portion of its budget to the salary of an individual? It's an issue which at the moment is talked about here in Houston.

Dillon: I think newspapers tend to assess who's out there, who's reading. It's not necessarily a matter of numbers, it's a matter of influence. At times, a small but very powerful and influential constituency can be instrumental in making space available for architectural commentary if, in the opinion of the people who are running the paper, they matter. I don't think it's necessarily a numbers game, although that's important. Part of the way architects or people interested in architectural criticism sell that beat to a newspaper is to make it clear that there is a readership there that really counts.

Papademetriou: I wonder how journalists feel about architects calling-up and wanting to see more information on architecture in the newspaper?

Holmes: There have been people who've called me and said, "We would like to see a full-time architecture critic on *The Houston Chronicle*." I think that would be a fine idea too. Certainly Houston has a great deal of wonderful architecture. But we have not seen the need to have, every day, another article that would be critical.

I think that you have to evaluate that request. Is that some architect saying: "We would like to have a lot of publicity about our buildings?" Actually, if they get good criticism, it's not necessarily going to be positive. I'm not sure that the idea of full-time is the point. I think that the idea of dedicated criticism is the point. The question is: how do you cover it? It's not enough just to "cover" it. I think it's fine to say, "Let's cover the arts with the same gusto, the same energy, and the same questioning that you would a fire, or a murder, or something." But evaluative things are a different story, and I think that newspapers in cities where a lot is happening architecturally have to keep up with it and provide provocative conversation to educate the public about what they're seeing, to give a point of view.

I have to say this: It's a very dangerous world out there. It's perfectly nice to say, "Yes, we want architectural criticism." When you start criticizing private enterprise, you could criticize a man's building just about as easily as the way that Bobby Sakowitz runs his store. It's not welcome, and you've got to be very careful about the way you do that.

Dillon: But doesn't that just throw it back on how responsible the paper is in covering its own city? Architecture is the biggest on-going story in Houston. It has been for ten years. I just came back from Albuquerque, and Albuquerque has a full-time architecture critic. And there's nothing going on down there.

Ghirardo: I find it distressing when advertisers say "We don't want to advertise with you because we don't like what you write." I find it distressing that the architectural community itself cannot sustain this kind of criticism. But, more importantly, I don't think that the architect is the only guilty party in these things. The people who should be talked about are the developers — what they're doing, and how. The function of criticism is to encourage people to question not just the way something looks from the outside but the basic assumptions. I was appalled when I came to Houston; I didn't understand it the first time. I drove around and there was nobody on the streets. This was downtown Houston, and you didn't see a soul. I wondered what had happened. I found out later that everyone is below the ground or in these walkways which, because of my car, I somehow didn't notice. I recognize that there are issues of climate here, but I wonder where the center of Houston is. If it's in buildings downtown, it certainly isn't the center after 6:00 PM, and I don't know what kind of center it is during the day. But there are some serious questions that have to be asked about the environment here, and just because Philip Johnson comes in and drops another one of his buildings down doesn't mean that good things are happening in Houston.

Papademetriou: How does the public begin to influence the media to produce good criticism?

Giovannini: Could I pick up on the thread of danger in the conversation. The word "criticism" has certain connotations. To me it seems that the way of addressing the issues that have been raised is to discuss the building as an artifact, the impact of the artifact on the city, and then conclude this-way or that-way. A critic should not support a faction. You're not in the business of interested parties, you're really impartial. Perhaps this is a bit naive of me. But I should think that any builder or architect who's reasonable will accept even negative remarks if they make sense and are reasonably presented, without ad hominem comments, I think the discussion itself can carry the issue. I don't think there's any reason not to confront an issue. You diffuse the aura of danger simply by being reasonable and fair.

Ghirardo: I want to make an argument for sometimes being unreasonable in criticism. If I write an article talking about some particular issue of relevance in a community, I don't have the money, or the influence, or the kind of power to push through something beyond criticism. Sometimes, if you write an "unreasonable" article or a very strong, polemically charged article, you're more likely to get the public involved. Architecture is a public issue and too many things slip through to completion without public involvement. How do you get the public involved? Well, you have to inform them. And, frequently, you have to tell them what the biggest negatives are, and that may be when they stand up.

Blake: I'd like to add something to this. Jane Jacobs — who worked with me on *Architectural Forum* — was one of those critics, one who's a very activist kind of person. She not only wrote (and wrote very persuasively) but got involved and stopped things from happening. There were some idiots in New York who wanted to build a 12-lane highway through lower Manhattan. She wrote against it, agitated against it, testified against it, and finally stopped it. Without Jane's intervention, all of what we now call SoHo — which is probably the most successful spontaneously developed area of New York or any other city in this country since World War II — would have been destroyed by that expressway. She stopped it. She was a critic who got involved. She became an activist. It seems to me that there is room for that kind of an activist, muckraking columnist who would confront *this* city, which I've seen now for about the sixth or seventh time. I think it is a dreadful city, and I regret to have to say this. It's a curious thing that none of the newspapers, none of the critics, say this in Houston. I think if Jane Jacobs or Lewis Mumford had been writing a column, these issues would have been brought out into the open. There would have been leadership exerted by the press to agitate, to stop, certain things — to stop this business of incredible concentrations of megabucks in glass boxes, with people compressed into tunnels below the earth. Somebody might have stopped this incredible city from happening. This is a city where, in fact, the neutron bomb already has been dropped. The only thing left are these megabuck 80-story glass boxes. Isn't there anyone here who talks about these things? Why don't newspapers take leadership in this kind of situation? Why don't the architects speak up?

Papademetriou: Well, I guess one of the questions is, who owns the newspapers?

Blake: It's a very good question.

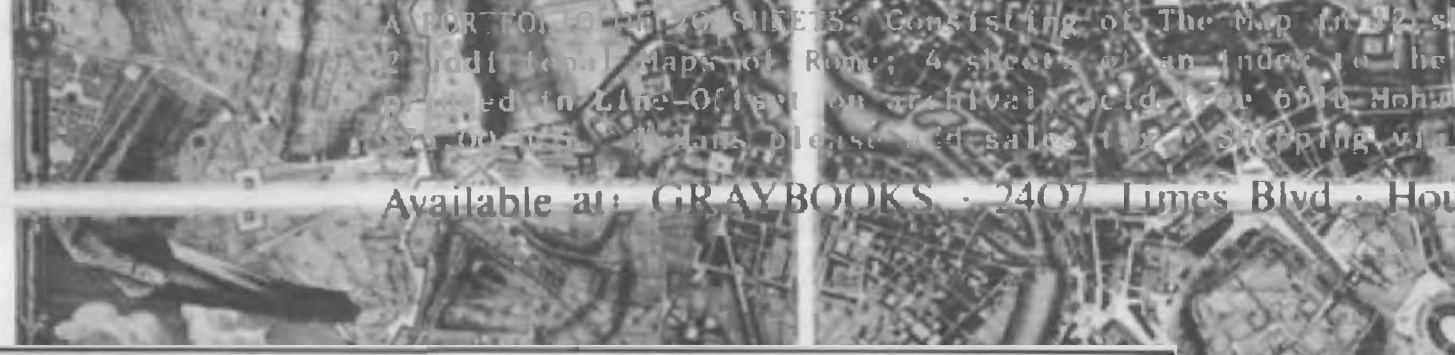
Lewis: One thing we haven't addressed is the audience of a newspaper. The readers' average educational age is tenth grade, and I was told recently that it may have dropped to eighth grade. I try not to write down to that level, but when I'm reporting I have to remember that not everybody knows architectural jargon. If you write architectural jargon most people aren't going to read it.

Ghirardo: Architects ought to realize that their interests aren't served by pandering constantly to the same economic interests. I know that architects have to put food on the table, and I know that sometimes you don't get to build a building the way you'd like to because you have to meet the expectations of a client. A poet doesn't have to do that nor does a painter; even somebody who writes books doesn't have to do that. But an architect does. I know that's a problem. But it would be in architects' interests to support publications which do take on precisely those kinds of issues. Then you would have more clout behind you when you say to a developer, "Look, another 70-story building just isn't going to work here. All these other people in the community are saying the same kind of thing too. Let's think about alternative solutions." The Rice Design Alliance and *Cite* ought to be supported. The newspapers ought to be supported in encouraging a very vocal and activist criticism. And architects ought to support it, even if it hurts them sometimes, because in the end it helps.

Dillon: I think it's important to remember — particularly in Houston, certainly in Dallas — that architecture is news. In a city like Houston, a city like Dallas, it is one of the biggest on-going stories in town. Sometimes the way that you sell criticism is by not using the word at all. You sell the news value of a building, and I don't mean real estate. I was not hired because my editors were particularly interested in architecture. They were like the average layman: they didn't have a clue why architects did what they did or why buildings looked the way they did. But they recognized a story when they saw it, and that was a kind of leverage. I think that even though we've talked about criticism and not about news, it's very important to keep this issue in mind. Architecture is as important as the school board meeting, it's as important as the city council meeting, it's as important as the public works. And that counts. It's not criticism, but it counts. I think it's a mistake to forget that.

Blake: There is an aspect of architectural criticism which seems to me fairly important: the incredible need for news. The voracious appetite of newspapers and magazines for something new — all the time, every day, every week — has created a very different situation for architecture in America in the last few years. There are architects practicing today who have never built anything at all, yet their drawings become as important as if the building in fact existed. The magazines and newspapers need news so badly that an outrageous project on paper (which will never be built, for which there is no client, nothing) will hit the front pages and the covers because the need for news is there.

There is a further aspect to this, which is detrimental to the development of architecture. In one of his pieces at the end of 1983 about the architecture of the preceding year, Paul Goldberger said that he wasn't going to mention the AT&T Building because so much had already been said about it. Well, of course, particularly by him. In fact, the building is barely occupied. I don't know whether you're aware of this, because the building has been written about for the past six years as if it were a reality. When I was in Cambridge three or four weeks ago, I assumed that Jim Stirling's addition to the Fogg Museum was built and occupied because everybody — Ada Louise Huxtable, Paul Goldberger — had written about it. Well, it's not built at all. It is a 50-percent completed building. It may or may not work; it may or may not look like Hell. Nobody is in any position to say anything about it at all. But by the time it gets finished it will be old hat and no one will report on it at all. I suspect this has a very detrimental effect on the development of architecture which many of us would rather not discuss, because we're in favor of having more architectural criticism, not less. This desperate need for news has shaped the direction of architecture in this country for the past 10 or 15 years, and not always in the way that I would have liked to see it.



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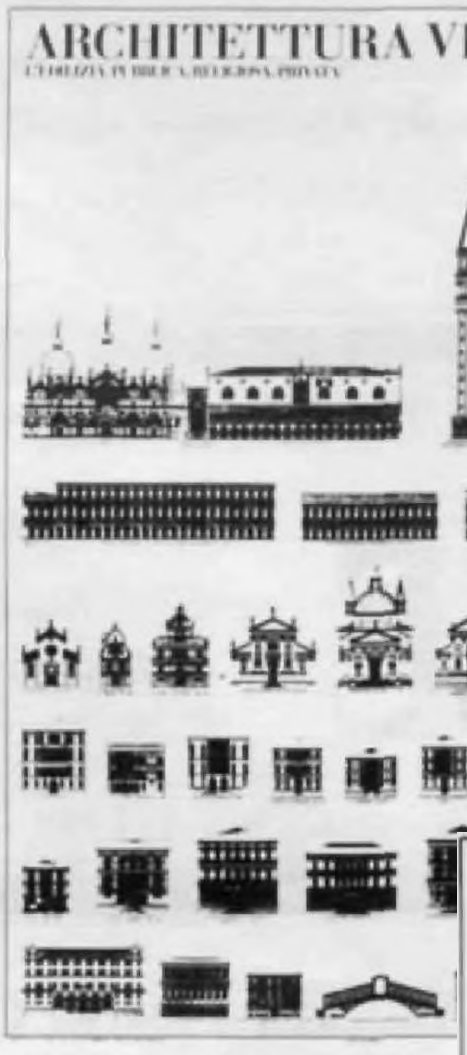

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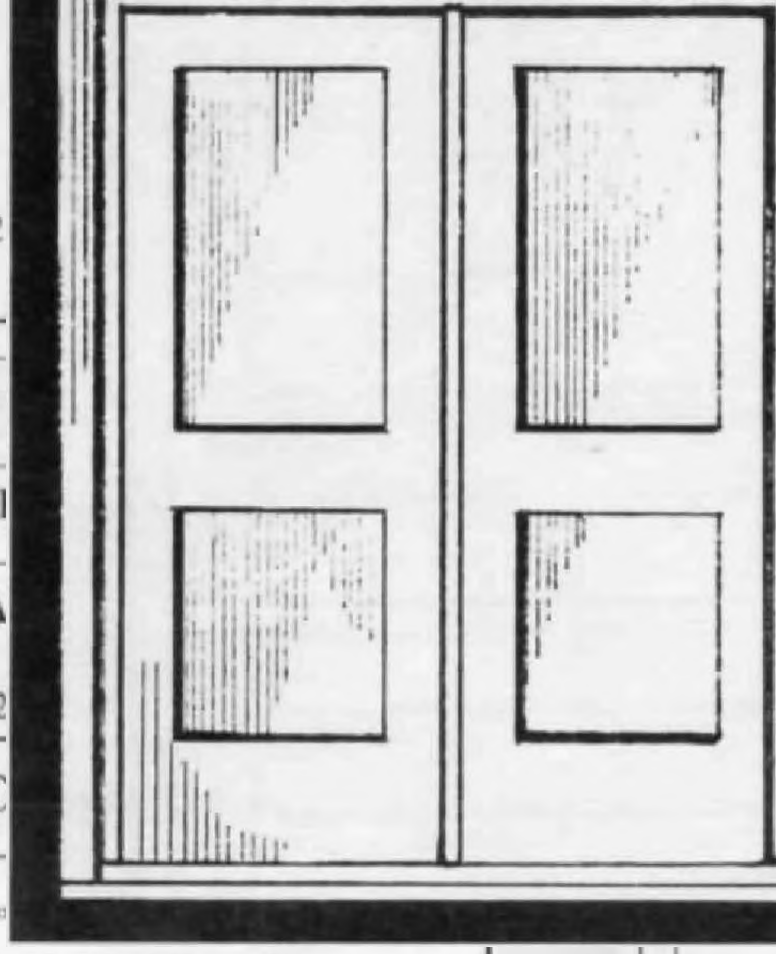

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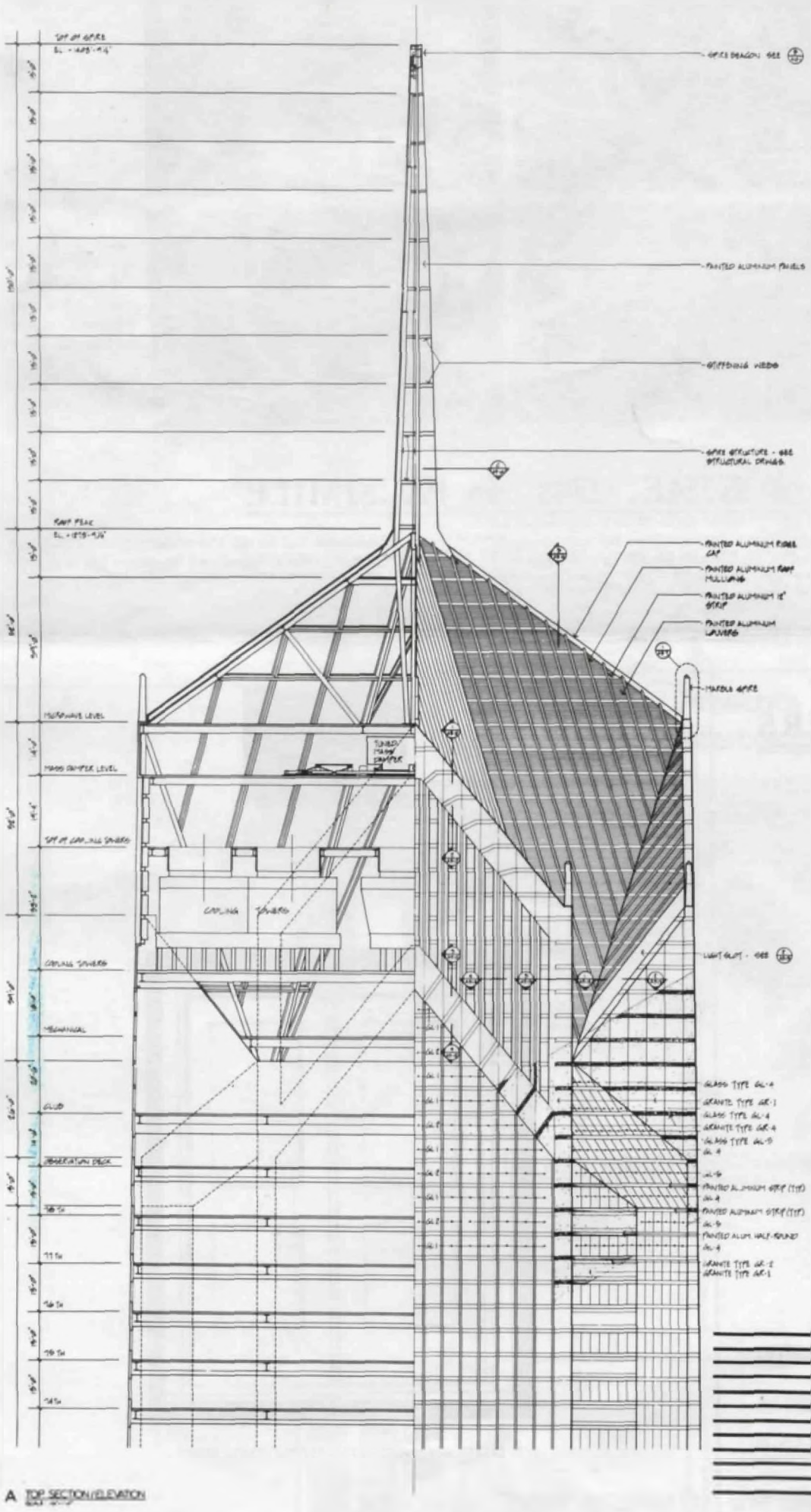

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