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Research among architects and designers identified the need for a very small-scale chip flooring design. And we followed current professional preferences for natural colors. The result is Seagate's unique pattern-color combination.

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FROM THE INDOOR WORLD® OF Armstrong

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EVENTS

July 3-8: Forest Products Research Society annual meeting, Brown Palace Hotel, Denver. Contact: FPRS, 2801 Marshall Court, Madison, Wis. 53705.
July 3-8: Conference on Failure Analysis: Design Needs and Research, Franklin Pierce College, Rindge, N.H. Contact: Engineering Foundation, 345 E. 47th St., New York, N.Y. 10017.
July 5-7: National Interfaith Conference on Religion and Architecture, Pfister Hotel and Tower, Milwaukee. Contact: Dorothy S. Adler, Guild for Religious Architecture, 1777 Church St. N.W., Washington, D.C. 20036.
July 6-8: Seminar on the Planning, Design and Implementation of Bicycle and Pedestrian Facilities, Rickey Hyatt, Palo Alto, Calif. Contact: Metropolitan Association of Urban Designers and Environmental Planners, P.O. Box 722, Church St. Station, New York, N.Y. 10008.
July 10-15: International Colour Association congress, Rensselaer Polytechnic Institute, Troy, N.Y. Contact: F. W. Billmeyer Jr., MRC Building, Room 217, RPI, Troy, N.Y. 12181.
July 13: Program on the Hospital Based Medical Office Building, Seattle. (Repeat program on July 15, Los Angeles.) Contact: Yoko B. Kojima, American Hospital Association, 840 N. Lake Shore Drive, Chicago, Ill. 60611.
July 13-17: Institute on Design of Environments for the Elderly, University of Notre Dame, Notre Dame, Ind., sponsored by the National Gerontological Society. Contact: Department of Architecture, University of Notre Dame, Notre Dame, Ind. 46556.
July 15: Entries deadline, 1977 architectural awards program. Contact: Red Cedar Shingle & Handsplit Shake Bureau, Suite 275, 515 116th Ave. N.E., Bellevue, Wash. 98004.
July 18-22: Course on Creative Communications for a Successful Design Practice, Harvard University, Graduate School of Design, Cambridge, Mass.
July 22-25: American Society of Interior Designers national conference, Hyatt-Regency and Sheraton-Houston Hotels, Houston. Contact: ASID, 730 Fifth Ave., New York, N.Y. 10019.
July 25-29: Course on Improving Professional Practice, Harvard University, Graduate School of Design, Cambridge, Mass.
July 25-29: Conference on Solar Energy for Heating and Cooling, University of Michigan, Ann Arbor.
July 31: Entries deadline, Owens-Corning 1977 energy conservation awards program. Contact: G. N. Meeks, Owens-Corning Fiberglas Corp., Building Products Operating Division, Fiberglas Tower, Toledo, Ohio 43659.
Aug. 1-5: Course on Designing for Winds, Tornadoes and Hurricanes, Institute for Disaster Research, Lubbock, Tex. Contact: Sue Haynes, IDR, Box 4089, Texas Tech University, Lubbock, Tex. 79409.
Aug. 8-12: Institute on Seismic Building Design, Stanford University, Stanford, Calif., sponsored by the AIA Research Corp., for faculty members of professional schools of architecture. Contact: AIA/RC, Institute headquarters.
Aug. 23-26: International Seminar on Sports and Leisure Facilities, Aulanko Congress Hotel, Finland. Contact: Association of Finnish Architects, Unioninkatu 30 A, 00100 Helsinki 10, Finland.
Aug. 24-Sept. 6: Seminar on Scandinavian Architecture, Copenhagen, Denmark. Contact: Danish Institute of Architects, Kultorvet 2, 1175 Copenhagen K, Denmark.
Oct. 9-17: Architects Abroad Program (a series of meetings with government architects in London and Helsinki, Finland), sponsored by AIA national architects in government committee. Contact: Architects Abroad, Association for Academic Travel Abroad, Inc., 1346 Connecticut Ave. N.W., Washington, D.C. 20036.

LETTERS

The letter below was addressed to AIA's committee on international relations and is published here as a gesture of sympathy for Rumanian colleagues. Ed.

The Rumanian Earthquake: On Mar. 4, Rumania was hit by the strongest earthquake in Europe in the last decades. The seism was felt all over the country, but especially in the south. It affected Bucharest, the capital, a city of nearly 2 million people, as well as powerful industrial centers such as Ploiesti and Craiova and many smaller urban and rural settlements.

The seism caused numerous human and material losses: Provisional figures for the dead are more than 1,500, and nearly 12,000 people were injured. About 200 plants and factories had to temporarily suspend their activities, and several hundred others suffered various damages. There were great losses in the agricultural sector as well.

Nearly 4,000 buildings collapsed or had to be demolished because of damages suffered. The town of Zimnicea was destroyed by about 80 percent. In Bucharest, most of the tall buildings in the downtown area were entirely destroyed or severely damaged. There were also two institutions of higher education, such as the school of medicine and the faculty of chemistry.

It is difficult to evaluate fully the effects of the disaster, for we lost numerous monuments of art and architecture—national treasures that cannot be replaced and which will always be missing from our cultural heritage.

Rumanian architects paid a heavy tribute. We have recorded 16 colleagues dead and even more injured.

Our people acted in the first hours to resist the catastrophe and to neutralize its effects. Under the direction of the Rumanian president, the entire population joined in clearing the streets, rescuing survivors, repairing damaged plants and ensuring as normal living conditions as possible for the inhabitants of localities affected by the seism.

In the operation of reinforcing damaged structures, we architects joined engineers in drawing plans for new buildings whose construction will start this year. We face a tremendous task, and construction volume has multiplied to match our needs. Our work and achievements will improve the structure of our cities and will contribute to raising the quality of life, although destroyed cultural monuments can never be replaced.

By informing you about the disaster that hit my country, I wish to emphasize the determination of Rumanian architects to assist in every effort to reconstruct damaged cities and to replace buildings and goods destroyed by the earthquake in order to foster the progress of our country.

Cezar Lazarescu
President
Union of Architects of the Socialist Republic of Rumania
Bucharest, Rumania

In Praise of Roland Wank: In the excellent story in the April issue entitled "A Dam Designed as a Powerful, Respectful Work of Architecture" (p. 36), the comment is made that Libby Dam "is unusual among engineer-designed hydroelectric power projects for having had the broad involvement of an architect, Paul Thiry, FAIA. . . ."

Research of the several architectural journals of the 1930s will bring to light the magnificent work of the Tennessee Valley Authority which had the full-time involvement of architect Roland Wank. Before his stint with TVA, he had been design partner for Fellheimer & Wagner and, later, for this firm's successors, Wank, Adams & Slavin in New York City.

Wank therefore had been able to demonstrate the value of architectural involvement 40 (good heavens!) years before Libby Dam. The shame is that there have not been more such "involvements" in the years between. *Harvey P. Clarkson, AIA*
New York City

The Sanserra Travertone™ ceiling from Armstrong. Rarely has the luxury look been more beautifully defined.

There are good ceilings, great ceilings, and exceptional ceilings. And when you get to exceptional, one name stands out. Travertone from Armstrong. One of whose family members is the Sanserra ceiling you see above—installed in the Michigan Blue Cross and Blue Shield office tower in Detroit.

When a luxury interior calls for a luxurious finishing touch, this is a ceiling that can fill the bill with style to spare. Made from acoustically efficient noncombustible mineral wool, Sanserra Travertone is available in both 12″ x 12″ tiles and 24″ x 24″ tegular lay-in panels. In a deep-etched design that can bring added quality and beauty to the most distinctive interiors.

So when only the best will do, you can't do better than Sanserra Travertone. Because Travertone ceilings are number one in the luxury league. To learn more, write Armstrong, 4201 Rock St., Lancaster, Pa. 17604.

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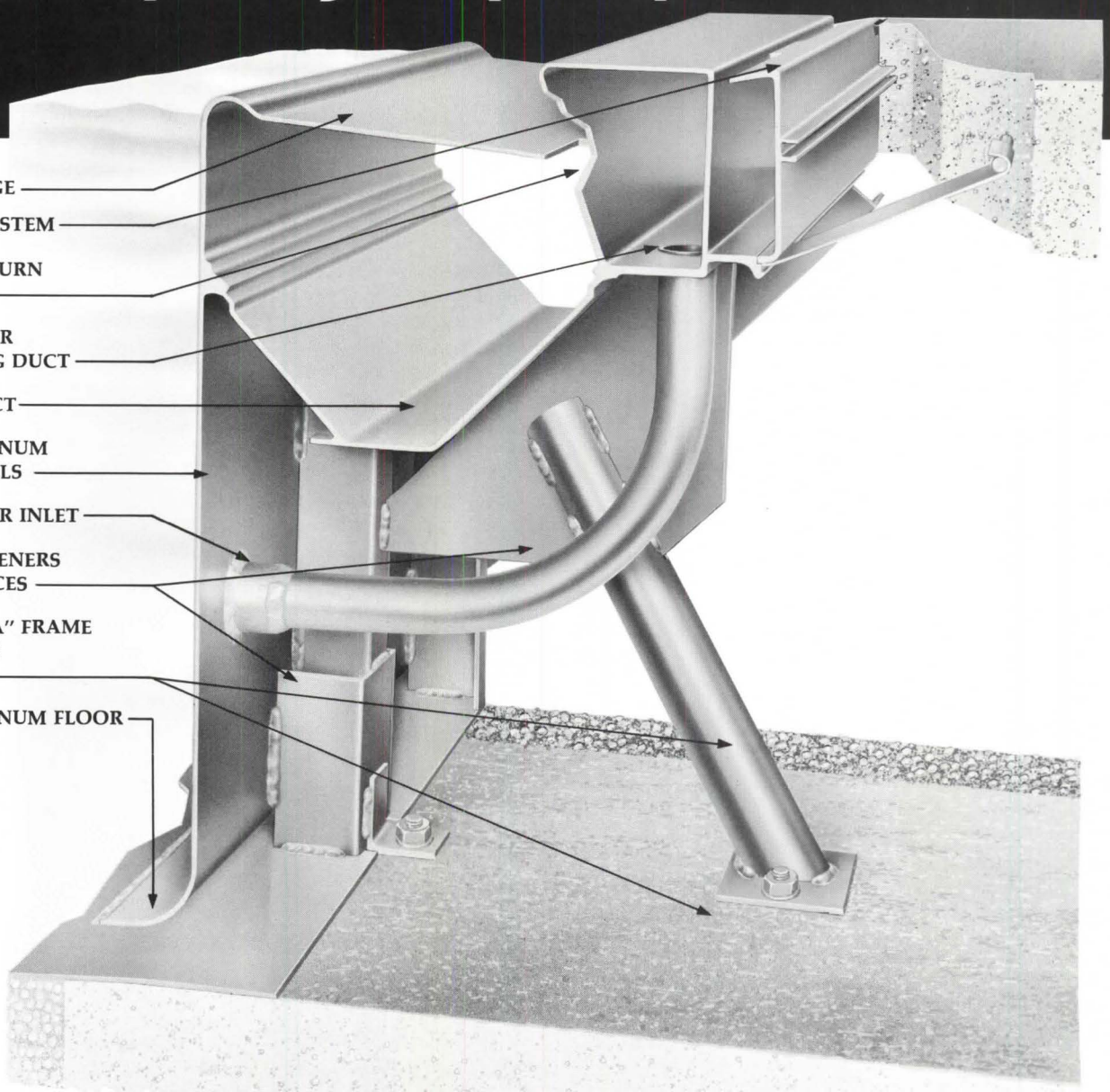

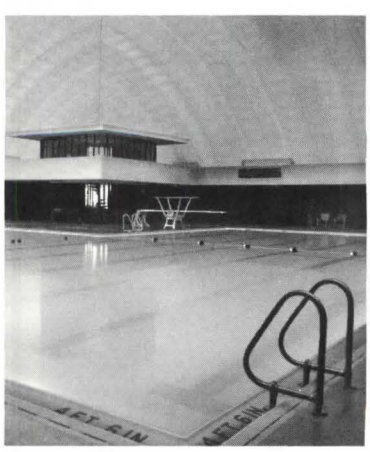

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AIA JOURNAL

Cover: Photo by Ron Partridge of the Oakland Museum, Oakland, Calif., by Kevin Roche, John Dinkeloo & Associates

Departments

AIA JOURNAL, official magazine of The American Institute of Architects, published monthly at 1735 New York Ave. N.W., Washington, D.C. 20006. Telephone: (202) 785-7300. Subscriptions: for those who are, by title, architects, architectural employees, and to those in architectural education (faculty and schools), and to libraries, building construction trade associations and building product manufacturers: basic rate $12 a year; $20 two years; $8 to architectural students in the U.S., its possessions and Canada. For all others: $18 a year in the U.S., its possessions and Canada; other countries to those who are by title, architects: $18 a year. All others outside the U.S., its possessions and Canada: $30 a year. Single copy: $2, payable in advance. Publisher reserves the right to refuse unqualified subscriptions. For subscriptions: write Circulation Department; for change of address: send Circulation Department both old and new addresses; allow six weeks. Second class postage paid at Washington, D.C. Quotations on reprints of articles available. Microfilm copies available from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Referenced in *The Architectural Index, Architectural Periodicals Index, Art Index, Avery Index to Architectural Periodicals.* VOL. 66 NO. 7.

BPA

Owens-Corning tells why you this unusual picture next time

The concept of open offices is gaining acceptance *quickly*. No wonder.
Both owners and architects are drawn to their airy, sweeping good looks. To the improved communications and increased efficiency they promote for workers. And to their astonishing economy of 50 cents vs. roughly 15 *dollars* per square foot for inevitable alterations to meet shifting work patterns.

But here's a word of caution. Plant our outlandish basketball "office" firmly in your mind. Because unless you base your design on *acoustics,* as well as aesthetics, you may never hear the end of it.

More than one open office has had to be modified—embarrassingly and *expensively* torn apart, baffled, receilinged, or refurnished—in order to achieve *workable* sound levels.

Owens-Corning has helped pioneer the development, testing, and matching of open-office components. Look over these highlights of what our experts have learned. Then call on us for *all* the details and *all* the components of a *successful* open-office system.

The ceiling.
Handsome is *as handsome* does.

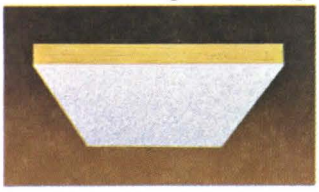
The ceiling is the single most important acoustical component in an open office. It should absorb, not reflect, sound. A perfect ceiling would have the same

*T.M. Reg. O.-C.F.

should remember you design an open office

sound attenuation as the open sky—a Noise Isolation Class (NIC) rating of 23.

An independent acoustical testing laboratory examined eight ceilings, including costly coffered and baffled systems. Their verdict: Owens-Corning's Nubby II Fiberglas* Ceiling Board, in any standard exposed grid suspension system, is *best* for achieving speech privacy at economical installed cost. In these tests, Nubby II was the *only* ceiling board with an NIC' as high as 20 in a flat configuration.

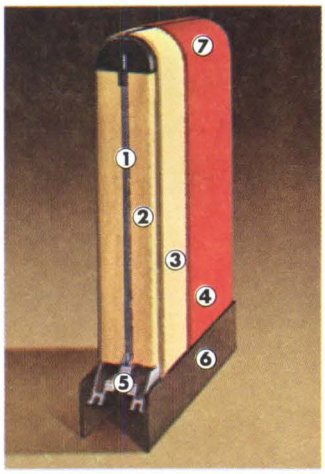


Some architects prefer the look of ceilings with *concealed* grids. Caution: As yet, *no* such ceiling provides the minimum NIC performance necessary to achieve satisfactory acoustical privacy in an open office.

In this league, handsome is as handsome *does*.

Acoustical screens. "Don't just stand there. Do something."

The sound screen, visual symbol of the open office, offers flexibility, economy, personal privacy, and acoustical control. It has *two* acoustical *functions.* First, to block direct sound transmission from one work zone to another. Second, to absorb sound, reducing flanking reflections into adjacent zones. Owens-Corning's sound screen is the *most* effective screen available. Its engineering features include:



1. A metal septum—to block sound transmission.

2. One-inch Fiberglas *core on* each side of septum—to absorb sound.

3. Sturdy special Fiberglas sound diffuser (Glastrate)—for abuse resistance.

4. Stain-resistant Dacron® Polyester fabrics. These fabrics are washable, colorfast, and fire-retardant (Class 25).

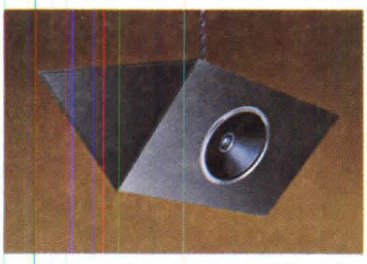
5. Extruded aluminum frame, fastened to septum—for strength and stability.

6. Painted anodized aluminum kickplates—for additional abuse resistance.

7. Top and side radii designed to minimize sound defraction over edges.

Masking sounds. The sounds of silence.

Even the finest acoustical ceilings and screens cannot do the whole job of providing speech privacy. An electronic sound masking system of speakers, installed in the plenum, is necessary.



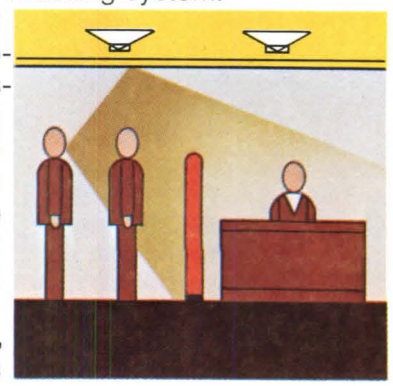
This sound must be unobtrusive—and *uniform.* Even at a few decibels above the desired $NC_{40} = 40$ rating, the masking sound causes people who are working in the office to begin raising their voices, defeating the whole purpose of the masking.

Owens-Corning's experts can recommend a background masking system that meets these requirements.

Owens-Corning system gets it all together.

For the open-office concept to be successful, the ceilings and screens must be tuned carefully to work *together,* and *with* the masking system.

Owens-Corning will be happy to provide you with all necessary information on achieving acoustical control in your open office. Or to guide the development of the whole acoustical system for you.



Write O. O. Meeks, Building Products Operating Division, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

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Buffalo Citizens Fight For Sullivan Landmark In Danger of Demolition

Concerned individuals have mounted a major effort to save the Prudential (Guaranty) Building in Buffalo, designed by Louis Sullivan. The 1895 structure has been called "the world's first formal skyscraper" and has been praised universally by architectural critics and historians. The fight is to save the landmark from the fate of Frank Lloyd Wright's 1904 Buffalo masterpiece, the Larkin Building, demolished in 1950.

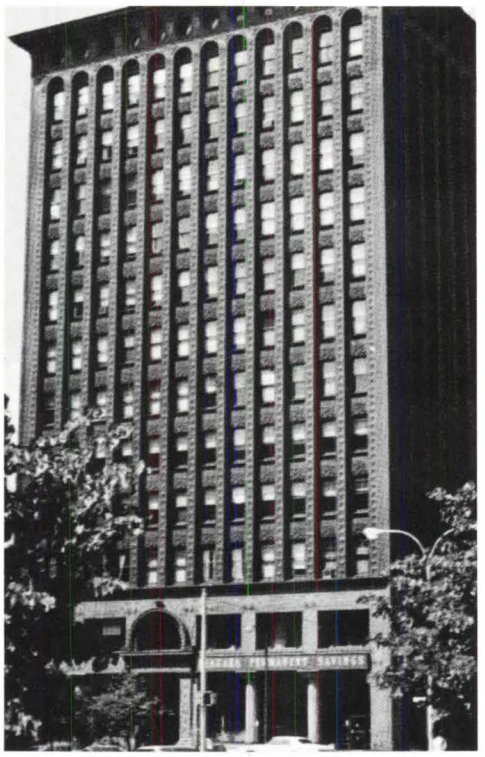
In 1973, an accelerated loss of tenants caused the Prudential to go into receivership. Problems were compounded in Feb. 1974 when a fire damaged the interiors of the building's upper four stories. A foreclosure sale occurred on April 5 of this year, and the building was acquired by the United Founders Life Insurance Co. of Illinois—the only bidder at the auction.

The Prudential had been designated as a landmark by the Buffalo Preservation Board on Mar. 30. Almost immediately after acquiring the building, the new owner petitioned for a "certificate of appropriateness" for demolition of the structure. Buffalo's code requires a waiting period of six months before designated landmark buildings may be demolished. Richard A. Goetz, attorney for the owner, told the *Buffalo Evening News* that the owner preferred to sell the building to someone who would use it, but if such an owner could not be found, the alternative would be to sell the building to someone who simply wanted the land at Church and Pearl Sts.

Fortunately, the waiting period has allowed time to develop plans to save the landmark. John Randall, architectural associate, State University of New York at Buffalo, persuaded the owner to withdraw the razing application, and the owner has contracted with him to become building manager.

Randall says his appointment "allows time to develop community-government solutions." It will also provide "some stability in building operations, despite heavy continuing loss" and will allow some "relatively low-cost upgrading measures" to further reduce loss of tenants and "enable short-term leasing to minimize severe economic drain."

An economic feasibility study has been funded by the National Trust for Historic Preservation, the New York State Council on the Arts, the local AIA chapter and the Landmarks Society of the Niagara



Frontier. Expressions of interest have come from the governor, county executive, mayor, state commissioner of the office of general services and Sen. Daniel Moynihan. A committee of representatives from local governmental, business, professional, educational, historical and architectural organizations has been established to give assistance to the preservation program.

This time around, Buffalo is determined to save its landmark. For more information and letters of support, write: Landmark and Preservation Board, City Hall, Niagara Square, Buffalo, N.Y. 14202, or John Randall, Louis Sullivan Museum, Prudential Museum, 28 Church St., Buffalo, N.Y. 14202.

Energy-Aware Architects React Favorably to Much In President's Proposals

President Carter's energy proposals encompass 10 basic policy principles, a dominating judgment being that energy demand must be reduced through conservation. "Conservation," the President said, "is the quickest, cheapest, most practical source of energy." This means—in addition to cost penalties for "gas guzzlers" and other restrictions—improved energy efficiency in new and existing buildings. In view of the fact that buildings are the nation's second largest energy-consuming sector, much of the success of any proposal for energy conservation depends upon design professionals and the construction industry as a whole.

John F. McGinty, FAIA, president of the Institute, says of President Carter's energy plan: "It is immensely gratifying to see the national leadership committed to a strategy of conservation so closely paralleling AIA policy. What the President has said in effect is that the design professions have a more essential role than the fuel industry in the solution of our national energy problems."

"Right on, Mr. President!" is the reaction of Carl Bradley, FAIA, chairman of AIA board's energy committee. Although "highly impressed with Mr. Carter's willingness to face up to the realities of the energy shortage," Bradley expresses regret that the President "seemed to give the impression that our life styles would be adversely affected." A conservation ethic, says Bradley, "would considerably improve the way we conduct our lives." Bradley hopes that the President's policy "will stimulate solar technology . . . and similarly that architects will be stimulated to become much more proficient in designing for energy conservation."

Richard G. Stein, FAIA, an authority on energy conservation technology and author of the recent book *Architecture and Energy* (*see* April, p. 42), has some reservations about the Carter proposals, but

continued on page 12

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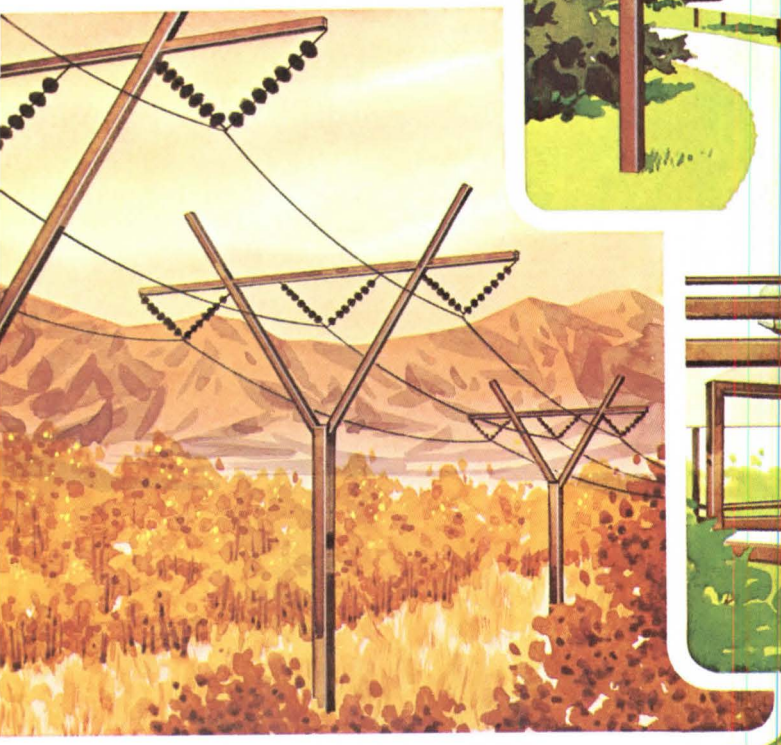

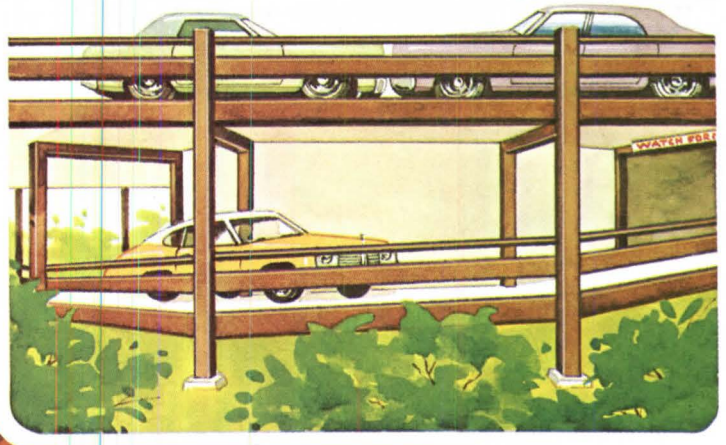

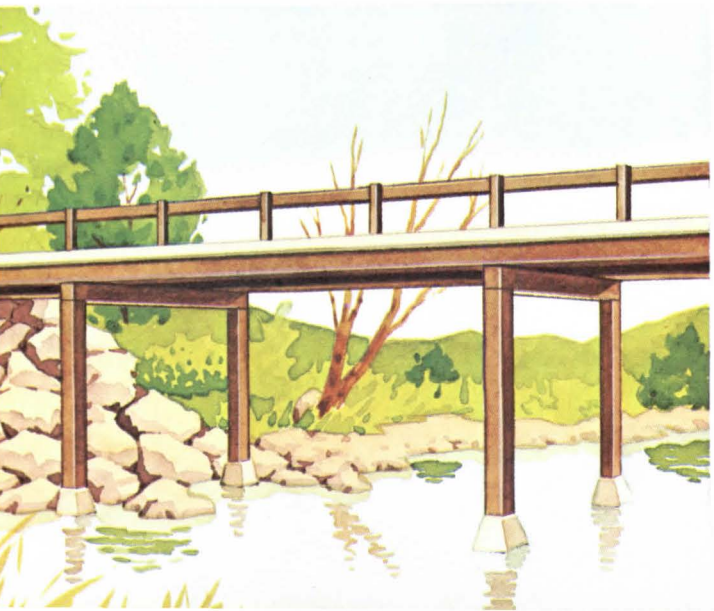

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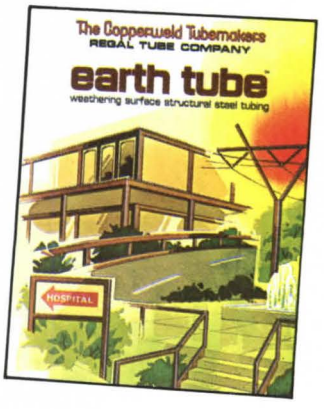

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Going On from page 8

he says that "one obvious and desirable promise" is the "acceleration in the programs and policies that reshape our entire method of thinking about building design. It is obviously only a beginning, and it leaves the architectural profession with the responsibility of helping to guide its direction in the most beneficial way."

The President "deserves credit for the expeditious manner in which he pulled together his energy program and for the candor in how he presented it," says Joseph Demkin, AIA, director of energy programs at the Institute. "The country as a whole does not realize the real urgency of the matter, and it is invigorating to see conservation—even on paper—elevated to a higher priority. Mr. Carter's proposals, however, are only a starting point. His program for building conservation does not contain much that is innovative. Most of the proposals have been around for some time and some are even going through Congress right now."

Nicole Gara, director of Congressional liaison at AIA, says, "As President Carter's recommendations relate to the building sector, they primarily cover residential construction (especially low-income housing), with some reinforcement of energy consumption reduction in federal buildings (already the subject of an executive order) and support for an energy conservation grants program for hospitals and schools."

The Administration's proposals contain tax incentive mechanisms, a strategy recommended at one time by AIA. "There are fundamental differences, however," Demkin says. "It is likely that the President's tax incentive approach will be equipment-oriented. For example, the consumer gets credit when insulation, storm windows or certain specified 'widgets' are installed. Such a tax credit approach does not necessarily ensure getting the most energy conservation possible nor the most cost beneficial investment. AIA's approach to incentives was to evolve a plan that would award tax breaks based on both estimated and actual energy savings, with energy analysis by qualified professionals."

Gara points out that the tax credit approach for retrofitting buildings with energy conservation and/or solar equipment has many Congressional supporters, but "there are a few leading conservation advocates who make a compelling case against using the tax system this way. The chief disadvantage of tax credits is that they assume building owners have ready access to affordable capital, which may not always be true," she says.

Demkin fears that the "widget" tax approach may result in an increase in fly-by-night insulation and home repair companies' sales to unsophisticated homeowners and may not result in maximum conservation. McGinty also stresses that "incentives for energy-conscious design of buildings must go far beyond simplistic concepts of 'weatherization' to include the full spectrum of possibilities inherent in a professional systems design approach."

Parallel to financial incentives for energy conservation devices, Stein says, must also be a "method developed that equally credits design that makes energy use unnecessary through built-in design decisions." It is already "within the capability and design vocabulary of the architect" to create new buildings whose "basic design, orientation, heat storage capability, efficient thermal retention, use of natural ventilation and light in a controlled manner" are possible without mechanical intervention. What we must find now, Stein says, is the "formula for public recognition of these as being the equivalent of the roof-mounted solar collector as a means of reducing national energy use."

Demkin calls one Carter proposal "reminiscent" of AIA's own energy conservation utility concept (*see* the 1975 report "A Nation of Energy Efficient Buildings by 1990," prepared by Leo A. Daly, FAIA, and the AIA energy steering committee). AIA's proposal, says Demkin, "would create a new institutional entity that would make money by saving energy. Therefore, there would be real inducement for 'conservation utilities' to optimize buildings so they would use as little nonrenewable energy as possible and as much renewable energy as possible. Careful professional analysis would be a requirement." McGinty explains, "Utility profits would be based on energy saved."

The utility scheme proposed by President Carter would require existing utilities to get into the retrofit business and to provide loans to customers for necessary investments. "Here again," Demkin says, "it is likely that the necessary analysis needed to optimize energy savings on a building-by-building basis will not be a part of the plan. Rather, it will more likely develop a laundry list of acceptable investments, such as minimum insulation, storm windows, maybe clock thermostats, heat pumps, etc."

McGinty says that the "notion of utilities furnishing retrofit capital should be expanded beyond gas companies and insulation. We need to put somebody in the business of saving energy—selling human comfort instead of BTUs."

Stein thinks that it is "important to remind ourselves that the purpose of all construction is not to use energy or save energy, but to serve human needs." A hidden but important energy component to be considered, he says, is "if a building is poorly planned and unsatisfactory from a human point of view in performing its function, it does not matter how energy efficient it is. It will not function well for its purpose, and it might therefore not have been built at all."

Other Carter proposals direct the HUD secretary to advance by one year (from 1981 to 1980) the effective date of mandatory standards for new residential and commercial buildings under the Energy Conservation and Production Act, although this will require Congressional action.

Gara says that AIA "worked strenu-

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International 'Habitat & Energy' Seminar

High rates of energy consumption underscore the fact that energy considerations have not played a major role in the planning and design of human settlements. An international seminar, scheduled to take place in Ottawa on Oct. 3-14, will consider urban energy consumption as related to changing patterns of urban growth. Called "Habitat & Energy," the seminar will be held under the auspices of the Economic Commission for Europe, of which Canada and the U.S. are members. Planners of the seminar say that it will be a forum for nations to discuss long-term policy options, assessing demands of human settlements on energy resources.

Thirteen special topics will be on the agenda, and ECE member countries have been asked to prepare papers on the various topics which are divided into two broad areas: community planning and development, and design, construction and improvement of buildings. For example, Poland and the U.S. will discuss energy issues arising from planning urban transportation systems. Bulgaria, Greece and the U.S. will present papers on the shape and orientation of new buildings for maximum energy conservation.

More than 140 delegates, with representatives from the United Nations and international agencies in attendance, are expected to attend the seminar. ECE has called on specialists and policy advisers of its member countries to help plan the seminar. Foremost among the seminar's benefits, say its planners, "must be the realization that the world community has entered a crucial stage and that crucial decisions reflecting all our energy concerns must be made today both in community planning and development and in the design, construction and improvement of buildings."

For additional information, write: Canadian Secretariat, ECE Seminar, Tower B, 5th Floor, 355 River Road, Ottawa K1A OP6, Canada.

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It started with a building in Cupertino, California. Hewlett-Packard combined Vulcraft's computer designed steel joists and joist girders with a fast-track construction schedule, and helped shave two months off the construction time of the building.

This shaved the costs. Not just because the lightweight nature of steel joists and joists girders makes them easier and faster to erect than other, heavier systems. But also because supporting columns can be placed further apart. And foundation size can be decreased.

All of which makes the Vulc system more economical than a t itionally fabricated structural ste system. Simply because it's ligh And faster.

So much faster, that buildin like those constructed for Hewl Packard can be delivered to the

Because electrical and mechanical systems can pass through the open web of the joists and joist girders, installation goes quicker. And changes can be made more easily when needed.

The high strength to weight of steel joists and joist girders can provide increased clear span areas, because supporting columns can be spaced further apart.

Although the Hewlett-Packard buildings using t Vulcraft system have basically the same structu design, the exterior features vary.

Architects: Ehrlich, Heft & Rominger. Structural Engineers: Rinne & Peterson. General Contractors: Rudolph & Sletten, Inc., Jacobsen Construction Company.

ey expect results. They got them from Vulcraft, all six times.

er as much as two months ear- than if a traditional structural em were used. And the Vulcraft em has since been used in five e Hewlett-Packard buildings: a nd in Cupertino; two in Corval- Oregon; one in Boise; and one in Diego.

The Vulcraft system can work just as well for you. To learn how, contact your local Vulcraft representative for your Joist and Joist Girder Specification Guide. Or write Vulcraft, P.O. Box 17656, Charlotte, North Carolina 28211. (See Sweet's 5.2/Vu.) Or call 704/366-7000.

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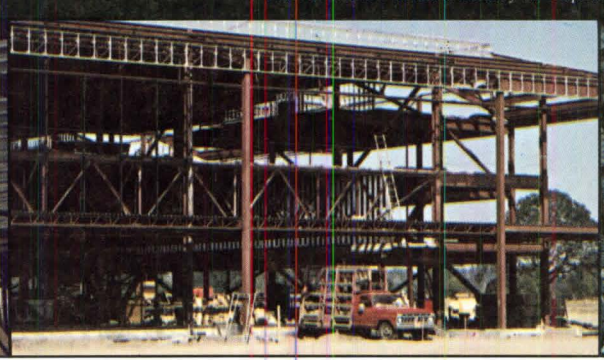
The Hewlett-Packard facility in Cupertino, California, the first of six to use the Vulcraft system.

The efficiency of Vulcraft's standardized column nections speeds up steel erections and saves costs.



The versatility of designing with Vulcraft steel joists and joist girders helps meet complex design requirements like this unusual eight foot interstitial floor space.

Vulcraft joists and joist girders can be designed to easily accomodate all lighting, heating, air conditioning, wiring, duct and pipe requirements.

Circle 23 on information card

Going On from page 12
ously last year to assure passage of legislation authorizing energy conservation performance standards for new buildings. The original proposal came from President Ford in 1975 and included mandatory enforcement provisions, which AIA backed. Congress was reluctant to mandate the use of the standards before they were developed. A compromise was reached to include in the law the sanctions against state and local noncompliance, but to add a triggering mechanism where Congress would have to bite the bullet at some future date. Under President Carter's proposal, Congress will now have to bite the bullet a year earlier." The legislation also makes funds available to states for assistance, and President Carter proposes to increase these funds by a considerable amount.

Results of a project now being conducted by the AIA Research Corporation should help HUD get a start on the development of standards for energy consumption in buildings. HUD contracted with AIA/RC for a five-month, $780,000 project on the measurement of current energy consumption in buildings of varying types across the country. The collected data will show how much energy a building with a given use in a given climate consumes.

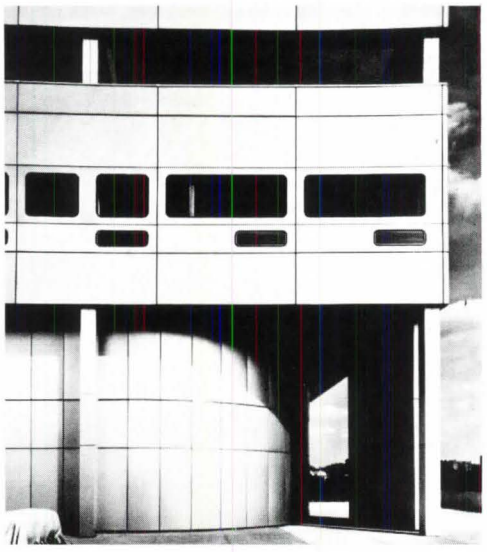
John Eberhard, FAIA, president of AIA/RC, points out the fundamental difference between performance standards and specification standards. "Performance standards state a desirable set of requirements to be met without reference to possible solutions, while specification standards give minimum requirements specified in terms of particular materials, systems, designs and construction methods. . . . The performance concept grows out of a rationale of meeting some human requirements or set of requirements. . . . True performance standards will have to be based on *human* requirements, not the performance of materials, components or systems."

The complexities of energy conservation are pointed out by Stein. For example, if mass transportation is to work, there must be population concentrations. "Too great urban densities, however, require great amounts of energy to bring in goods and services . . . and further amounts to take out the various waste products. We have not yet developed an ability to measure total urban systems in their energy requirements to the extent that now becomes necessary," he says. He also sees the relationship of private automobiles to solar collectors, which must be unobstructed for optimum performance. Solar collectors result in "relatively low-density building configurations, something approaching a suburban living scale, and increased automobile use. "The energy required for a family's transportation can then be considered as part of its total energy budget, and the attendant savings in use of fossil fuel or electricity for heating may be offset by the increased energy use of the automobile."

Meier and Yale Student Receive Reynolds Prizes

A care facility for the mentally retarded and a low-cost shelter system are winners of Reynolds Metals Co.'s prizes for 1977.

The Bronx Developmental Center, designed by Richard Meier, FAIA, also won a 1977 AIA honor award (*see* May, p. 36). Meier, whose firm is located in New York City, will receive a $25,000 honorarium and an original sculpture in aluminum for the achievement. The R. S.



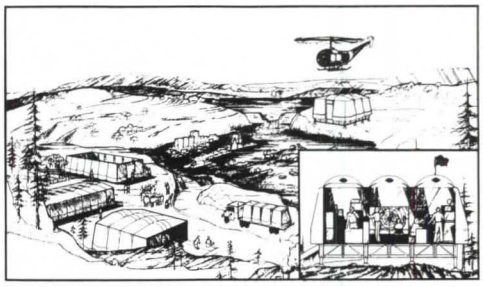
Reynolds memorial award is presented annually for the design of a "permanent, significant work of architecture, in the creation of which aluminum has been an important contribution."

The Bronx center has an exterior skin of clear anodized aluminum one-eighth of an inch thick (detail above). The jury (Louis de Moll, FAIA; Robert B. Marquis, FAIA, and British architect Norman Foster, last year's award winner) said that the "sensitive, clean and crisp vocabulary of silver anodized skin developed by the architect provides the unity and, by subtle manipulation of detail and forms, reflects the diversity of the [center's] social organization."

Daniel T. Dolan of Yale University's school of architecture has won the 1977 Reynolds aluminum prize for architectural students. His design of a "square-circle basic shelter system" provides an economical basic shelter for emergency and multipurpose uses. Transportable by surface or by air (drawing right), the unassembled 18x22-foot module forms its own package. A small group of persons at the building site can construct the shelter simply by unfolding it into its final configuration. Two or more modules can be combined to form a variety of shapes.

Light in weight, impact and corrosion resistant and heat and light reflective, the aluminum shelters can be recycled after use.

The $5,000 prize will be divided by Dolan and his school. The Reynolds prize, awarded annually for the "best



original architectural design in which creative use of aluminum is an important contributing factor," is sponsored by the Reynolds Metals Co. and administered by AIA.

Honorable mention awards went to James R. Sailor, Texas Tech University, and Desmond Fletcher and David Bentley, University of Texas at Austin. Each of the two entries won awards of $1,000 to be divided equally between the students and schools.

Jury chairman was Robert L. Bliss, FAIA, dean of the graduate school of architecture, University of Utah. Other members of the jury were Rosaria Piomelli, AIA, of New York City and Allen Koster, University of Minnesota's school of architecture and last year's award winner.

Savannah May Be First In Adaptive Use Program

Savannah, Ga., may become the first city to participate in the federal government's Public Buildings Cooperative Use Act (PL 94-541), signed into law in Oct. 1976. Under the legislation, the General Services Administration will defer a proposal to erect a new federal office building in Savannah and instead determine if a complex of historical and architectural significance can be adapted to new use.

GSA, under the law, is required to seek the assistance of the Advisory Council on Historic Preservation in identifying appropriate buildings for adaptive use. The council has recommended that GSA study the feasibility of locating federal office activities within the boundaries of the Central of Georgia Railway complex. The council calls the area "one of the most significant assemblies of railroad architecture in America."

Building of the railroad center started in the 1850s, and part of the complex is located on the site of the battle of Savan-

continued on page 20

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Circle 24 on information card

Going On from page 16
nah, waged in the Revolutionary War. Shop buildings in the south part, once used for railroad maintenance and operation, are vacant and deteriorated. To the north are the so-called red and gray buildings, once used as railroad office space. Also in the area are a parking lot, two warehouses still in use and the restored Savannah passenger depot, now used as a visitors' center.

The council proposes that GSA acquire the red building and renovate it for general purpose office space. As encouraged under the public use act, the warehouse would be leased for cultural and commercial uses. The council also suggests that the balance of required federal office space be provided by new construction on city-owned land to be acquired by GSA.

The council reports that GSA has indicated interest in the proposal and will study the railroad complex in depth to determine the feasibility of the council's recommendations.

The Public Buildings Cooperative Use Act directs GSA to acquire and restore buildings of significance and to convert these structures into federal office space, "unless such use of such space would not prove feasible and prudent compared with available alternatives." The law also encourages multiuse of federal buildings, the intention being to have such structures contribute to the vitality of a community rather than to stand as isolated enclaves.

In 1974 and 1975, the chapter conducted surveys on a different basis, asking for the amount of work authorized to proceed, expressed in construction dollars. The 1974 survey showed new work in 1973 to be 55 percent below the peak year of 1969. The 1975 survey showed a further drop to 75 percent below the 1969 figures. These figures "are more drastic" than what is shown in the graph, "which indicates that architectural employees were the major casualties in the contraction in the sizes of offices," Lewis says.

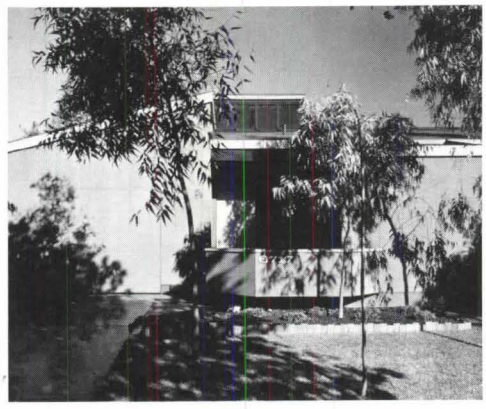
Tract House Conversion Receives Plywood Award

William McCulloch, AIA, of Newport Beach, Calif., is winner of a top award in this year's American Plywood Association's design awards program. The architect used rough-sawn plywood siding to convert a 1,400-foot-square traditional 1950s tract house into a 2,100-foot-square contemporary residence (photo above).

Other top winners are: Donald Sandy Jr., AIA, and James A. Babcock, San Francisco, for Tree Swallow Court, a townhouse project; William P. Bruder, New River, Ariz., for a pinewood cabin, and Charles Herbert & Associates, Des Moines, Iowa, for a branch bank building.

Citation of merit recipients are: E. Fay Jones, AIA, Fayetteville, Ark.; Gwathmey-Siegel, New York City; Barnett Schoor Co., Inc., Seattle, and M. A. DeGrasse, AIA, Seattle.

Jury chairman was Paul Rudolph, FAIA; other jury members were William Bain, FAIA, and John Bloodgood, AIA.



Journal Wins Designers' Medal and Four Citations

The cover of the Oct. 1976 AIA JOURNAL won a silver medal in the Society of Publication Designers' annual editorial design awards competition. Beautifully designed and crafted sculptures were presented to Suzy Thomas, JOURNAL art director, and on behalf of photographer Patricia Duncan (wife of Herbert E. Duncan Jr., FAIA). Mrs. Duncan's work was an interior photograph of the Nebraska State Capitol, Lincoln. The winning cover related to a feature story by Henry-Russell Hitchcock and William Seale entitled "How Nebraska Acquired a State Capitol Like No Other."

Entries, evaluated by a panel from all areas of the publishing industry, were judged on the basis of esthetics and relationship of artwork to editorial content. Winners were selected from a field of 3,000 entries submitted by publications across the country.

In addition to the silver medal, the AIA JOURNAL received four certificates of excellence. Three of these honors were for the design of complete issues, the May, July and Oct. 1976 JOURNALS. The fourth certificate of excellence was won for the design layout of a single story in the May issue—"New York's Bedford Stuyvesant: Rare Urban Success Story," by Fred Powledge.

Entries from eight types of publications were eligible to enter the competition, the only one in the nation devoted exclusively to publication design. Categories include total unit design, page design, illustration or photography.

Presentation ceremonies, attended by Mrs. Thomas; Michael J. Hanley, publisher of the JOURNAL, and Michael M. Wood, sales manager, were held in the Tower Suite, Time & Life Building, New York City. Some 500 of the entries are on exhibit at 40 W. 25th St. in Manhattan. Among other periodicals winning medals in the competition were: *American Ephermera, Kodak International Photography* and *Upper & Lower Case.*

AIA Opposes Fund Cut For Historic Preservation

AIA supports a fiscal 1978 appropriation of $100 million for the historic preservation grants-in-aid program administered by the National Park Service under authority of the National Historic Preservation Fund Act of 1976 (PL 94-422). In testimony before Congressional committees on appropriations, John J. Cullinane, AIA, chairman of the Institute's committee on historic resources, said that "to restrict appropriated funding to a third of the authorized level, as has been suggested by the Administration, would be penny-wise and pound-foolish. The opportunity is rare indeed when Congress can bring together and advance so many goals in one bill such as this."

Cullinane said that the authorized level of $100 million should be considered in the light of other Congressional priorities. In the area of economic recovery and jobs creation, he said that "historic preservation projects funded by this appropriation will probably be more labor intensive than new projects because the work must be done very carefully and on a small scale. In comparative economic terms, of course, the historic preservation grant program is dwarfed by the size of the public works funds. But unlike the 100 percent financing for general public works, the matching grant aspect of historic preservation means that every dollar appropriated counts twice in creating jobs." Also, he said, the program is "ready to go."

Another Congressional priority is energy conservation, Cullinane said. In terms of total energy use, the cost of rehabilitating historic in-town structures is often "substantially less than constructing new public facilities." Full funding would result in aiding states and local governments to shape "their physical plants to conform with national energy goals."

Congress is also concerned, Cullinane said, about neighborhood conservation. "Both houses of Congress are actively moving forward with proposals to make neighborhood conservation the cornerstone of federal urban policy." Historic preservation can play a catalytic role in the revitalization of many urban neighborhoods. A full appropriation of $100 million for historic preservation grants "would complement and amplify other major national goals," Cullinane concluded.

continued on page 24

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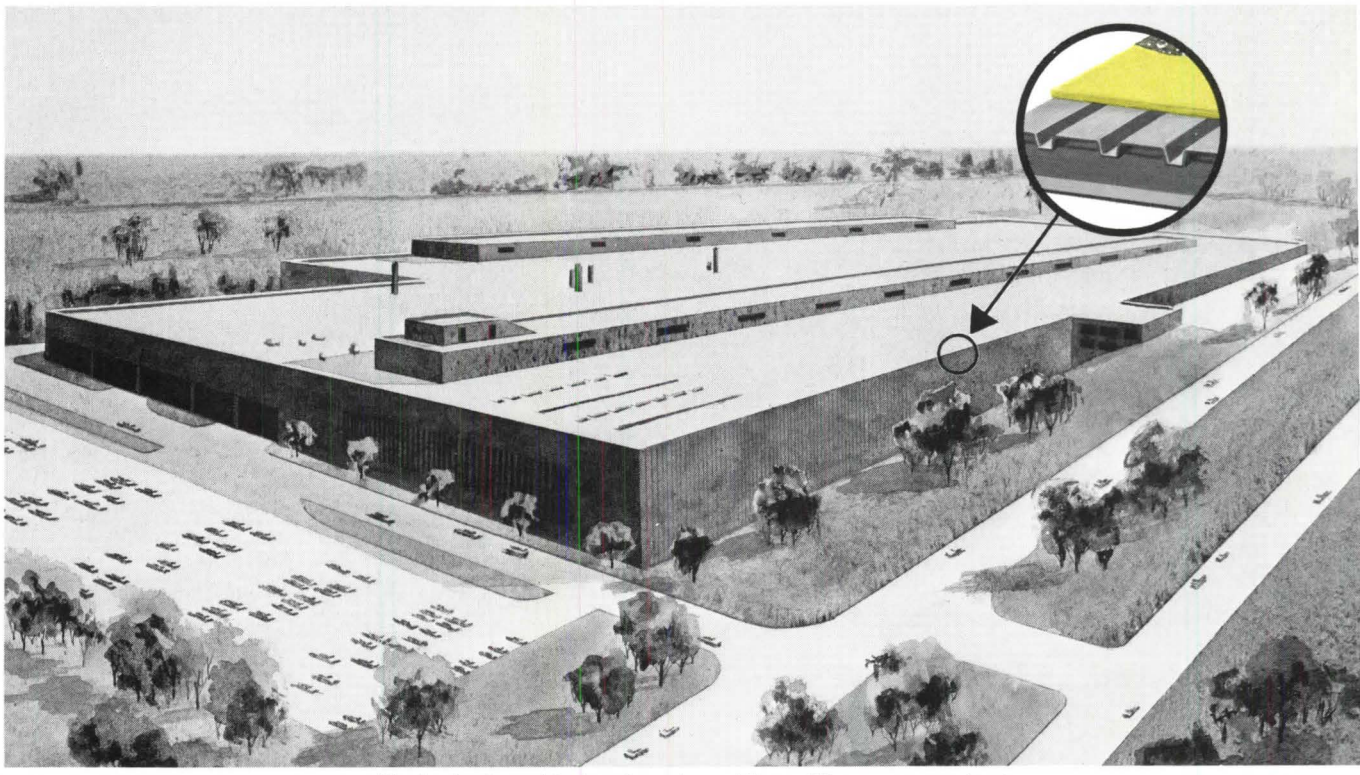

Projected cost to heat and cool the million-square-foot
Deere & Company plant for 20 years with only 15/16-inch (C=27) Fiberglas roof insulation:

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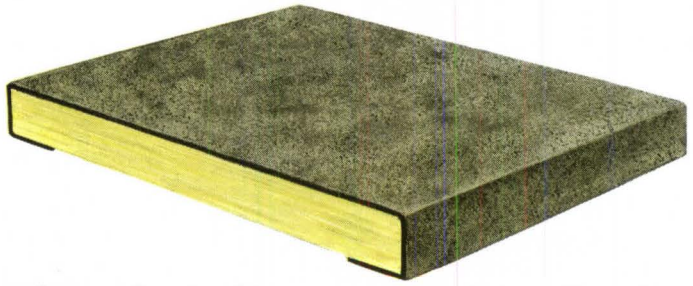

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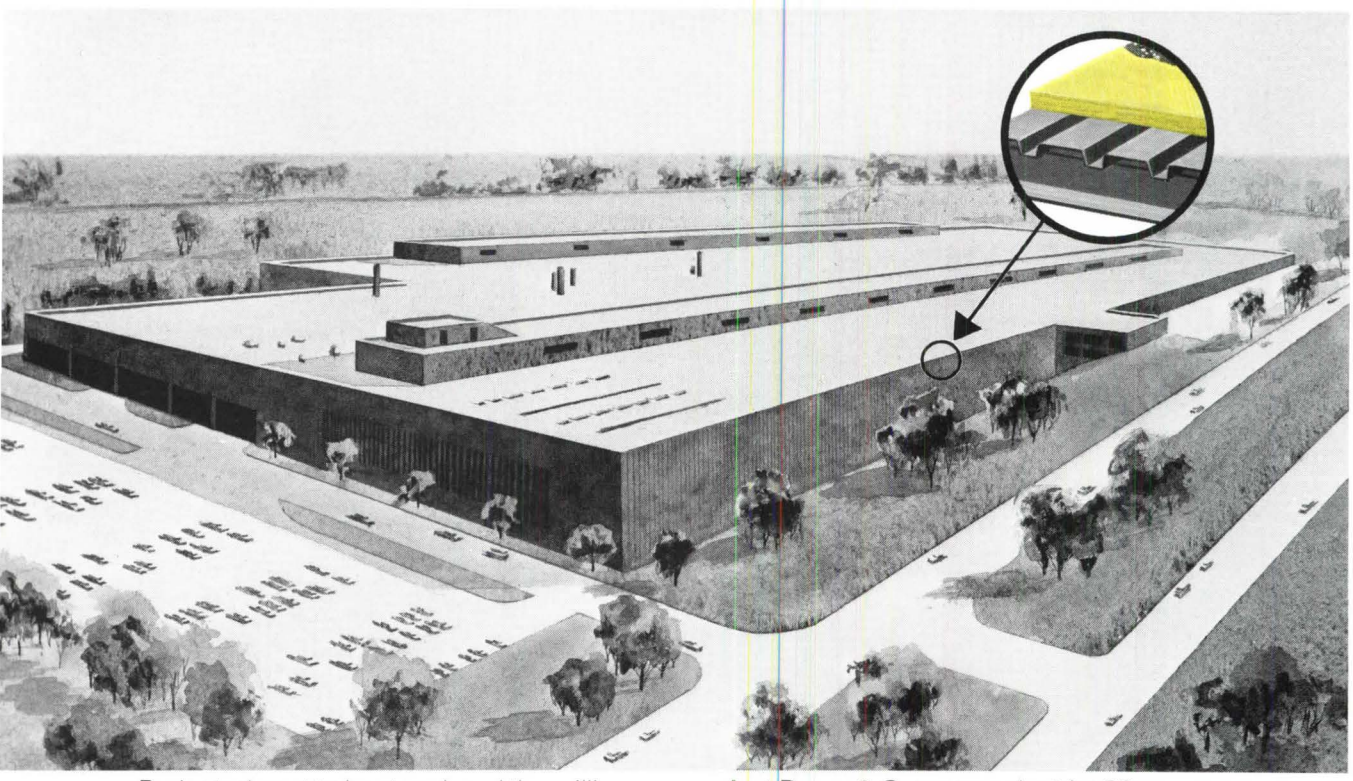

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Going On from page 20

Looser Design Standards For Local Jails Opposed

AIA's committee on architecture for justice has strongly denounced an amendment incorporated in the House bill extending the Local Public Works Capital Development and Investment Act of 1976. The amendment, introduced by Rep. Dale Milford (D-Tex.), would remove the existing requirement that local jails built with federal funds conform to modern design standards.

Currently, before federal funding for local jails is permitted, construction plans have to be approved by the National Clearinghouse for Criminal Justice Planning and Architecture, a function performed under contract with the Law Enforcement Assistance Administration.

Milford's amendment would permit states to obtain federal funds for jail construction without meeting federal criteria. A state would only need to certify that it has a jail consruction standard.

The AIA committee says that the design standards for jails used by LEAA are the "most complete, modern and effective standards available. In contrast, the states have been very slow to modernize their standards, many of which date back to the 19th century, if they exist at all." Moreover, says the committee, state standards "are often far inferior to those used by the federal government and are not uniformly enforced."

AIA, says the committee, recognizes that there are "more effective ways to design jails than with the use of bars. Recognition of the deplorable and inhumane conditions of local incarceration facilities throughout the U.S. must be accompanied by a continuing resolve to provide new and more appropriate environments." The current criteria must be continued, says the committee, "especially in light of the evidence that their use has not encumbered the local public works program in any way."

Sen. Lloyd Bentsen (D-Tex.), a member of the Senate public works committee now marking up a bill similar to the House legislation, heard arguments in favor of introducing language similar to that in Milford's amendment. Bentsen, however, decided against sponsoring such an amendment to the Senate bill.

John M. McGinty, FAIA, president of the Institute, has expressed the position of AIA on the matter. In a letter to the House and Senate conferees, now reconciling differences in House and Senate bills, he said that "AIA supports the continuation" of LEAA's design guides "if the federal government is to avoid paying for the construction of obsolete tanks and cages."

continued on page 72

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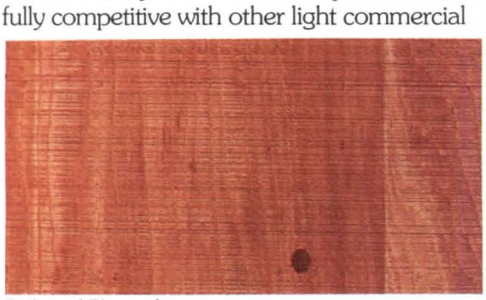
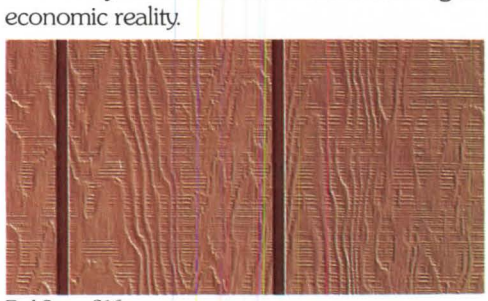


Redwood Plywood



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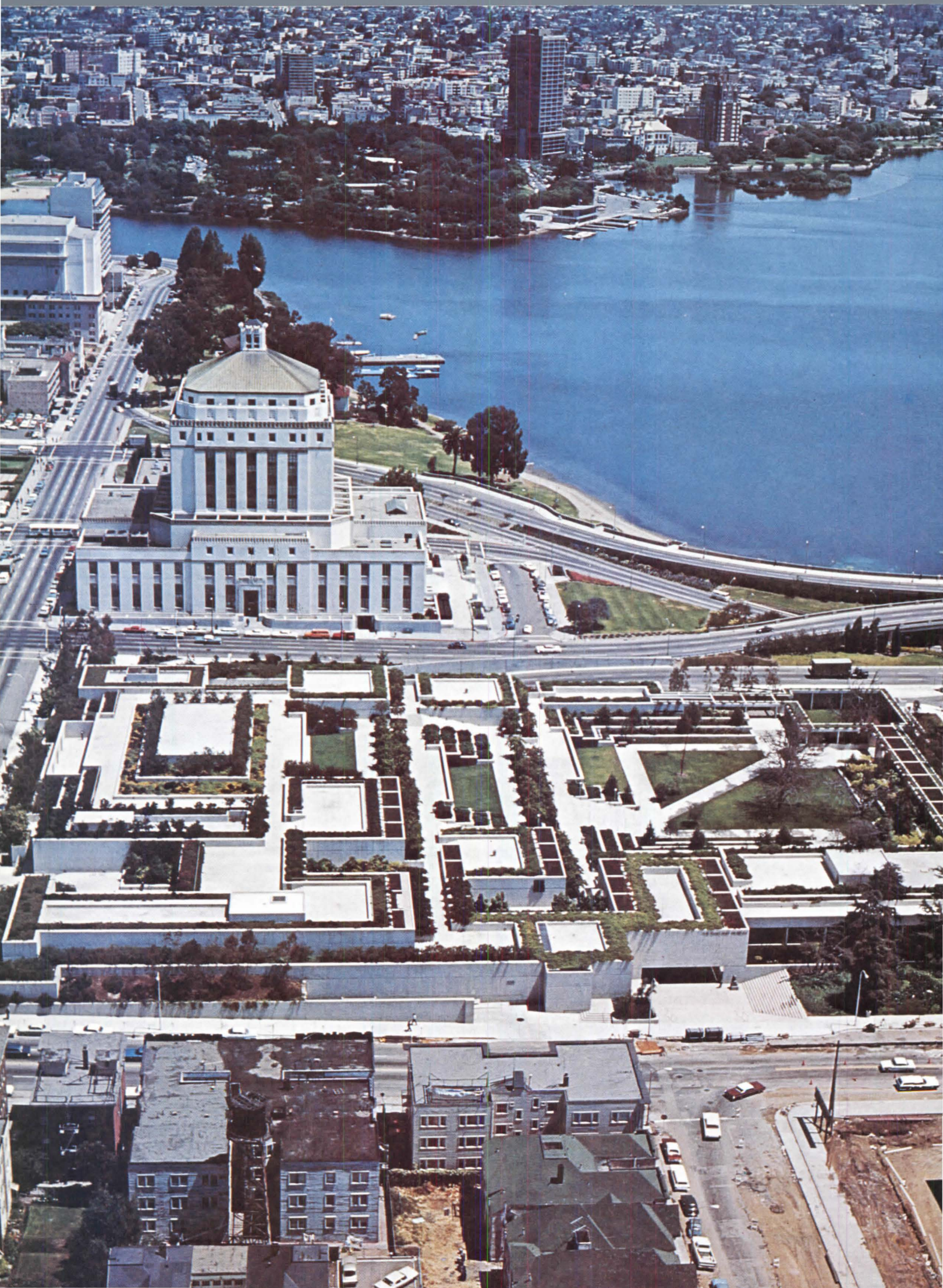
Last month we announced the closing of the "ethics forum," that portion of the magazine in which, for nearly a year, we have been running a very lively exchange among members (and some nonmembers as well) on the proposed changes in the Institute's ethical standards. The reason for the closing, of course, was the then-impending vote on the changes at the San Diego convention.

At this writing, we don't know what the outcome of that projected action will be, but whatever happens we have had second thoughts about the closing. It strikes us as a good idea for there to be a place where members and others can discuss and debate Institute affairs, ethical or otherwise, without the rigors that we have to impose upon formal articles to meet standards of literacy and readability.

We can see no reason why the JOURNAL should not be that place. So please consider this an open invitation to comment on any subject pertaining to the Institute for these pages. It may be that such comment will be carried in an expanded "letters" section. It may be, if the response is sufficient, that we will open a permanent "AIA Forum" section.

The criteria by which we will select comments for publication will include some of the same applied to the ethics forum: that "shorter will prevail over longer, reason over emotion, readable prose over rhetoric." As we said then, we hope that you will accept this invitation and we will be watching the mails. *D.C.*



Evaluation: A Still-Remarkable Gift of Architecture to Oakland

The city's terraced museum is less a conventional building than a 'new kind of park-like urban fabric.' By Allan Temko

Rarely has a single building launched the career of an architect with such brilliance as the Oakland Museum, Kevin Roche's first design after the tragic death of Eero Saarinen in 1961, when he and John Dinkeloo found themselves at the head of one of the finest architectural offices in the world. Yet few architects had heard of either man. Dinkeloo, who had left Skidmore, Owings & Merrill to become the mainstay of Saarinen's production staff for great projects such as the General Motors Technical Center, was the slightly better known because of his formidable abilities as an administrator with a rare grasp of esthetics, economics and refined technologies. Roche, on the other hand, although obviously a special person, highly intelligent, deeply cultivated and very winning, could also be reticent, and was something of an enigma except to good friends. He had been educated in his native Ireland, where he experienced the intense literary and creative life of Dublin, but where there was simply not much to build; and after short stays in England and Mies' Chicago he had worked, happily enough, in Saarinen's shadow since 1950.

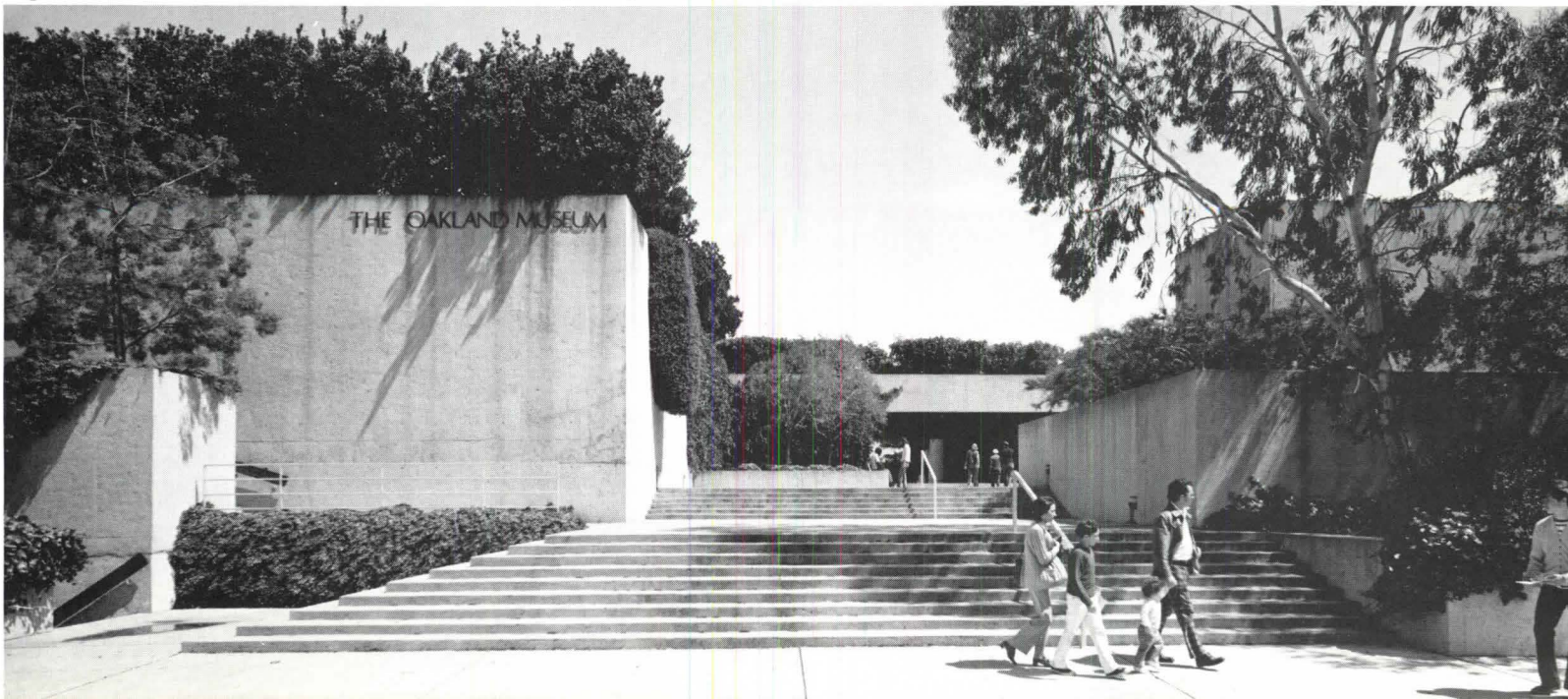
That Roche was extraordinarily gifted in his own right, and potentially a more profound architect than Saarinen when he succeeded Saarinen at the age of 39, was thus clear only to a small group of advanced designers, mainly in the Saarinen office itself, where men such as César Pelli were aware of Roche's role in the firm's best work. Probably Roche's most significant contributions were to the eloquent headquarters of John Deere, the first building sheathed in Cor-ten steel, of which he was really co-designer. But the building in the end was Saarinen's, as were CBS, Bell labs and the famous last essays in structural expressionism: the Yale rink, TWA and the much superior Dulles Airport.

Roche was involved in all of these projects, and saw through construction those which were unfinished at Saarinen's death. Yet, except for the most logical functional programs, for instance the careful consideration of passenger movement at Dulles, which resulted from systematic analyses of users' needs that the office dubbed "problem-solving" or "responsible architecture," there was nothing in the forced drama—should one now say, melodrama? —of Saarinen's expressionism which anticipated the masterly lesson in rational city building which Roche would give in Oakland, Calif. The contemporary movement, badly torn by the early 1960s between Miesian orthodoxy and confused, self-indulgent heresies, was taken unawares by the humane splendor and social vision of his concept for the Oakland Museum.

Little wonder, for the concept was unique. Unless one hunted back through history to the hanging gardens of Babylon or, better for Roche, to the once verdant terraces of Hatshepsut's temple overlooking the Nile at Deir el Bahari, there was no analogy for his unprecedended garden enviroment that in fact was a three-level regional museum—another original idea —of science, history and art. Lifting in luxuriant tiers of trees and shrubs and vines, thousands of plants in all, set out in carpeted beds, edging lawns, climbing trellises, tumbling over walls in delicate sprays or profuse masses of green, so that the beautifully proportioned concrete structure would be softened, overgrown and in time largely effaced by foliage and flowers, the museum would not be a conventional building at all, but a new kind of park-like urban fabric—an incomparable setting for art, festivity and noble events—that would be an intimation of the possible grace and dignity of a democratic city of the future, extending freely beside Lake Merritt.

For in theory the continuum of low, horizontal forms and verdurous spaces could go on indefinitely. Just as the museum does, with its theater and classrooms, offices, bookstore, workshops, restaurant and outdoor dining areas, it could accommodate a wide variety of uses, expanding across the urban grid in directionless patterns, much as the museum covers four downtown blocks, courteously meeting the existing cityscape with its richly planted, unassertive borders, half-hidden by thickets of cedar and redwood, eucalyptus and oak. The great promise of the concept—which SOM failed to see when it built a pugnacious community college on the museum's southern side, perhaps to show how tough inner city kids could

Mr. Temko, an architectural historian and critic based in Berkeley, Calif., is author of *Notre Dame of Paris* and *Eero Saarinen*. He wishes to dedicate this article to Mrs. Esther Fuller, whose crucial role in development of the Oakland Museum is explained in the text.



Except at the entries (photos previous pages and right), the museum faces the unimposing side streets mainly with blank concrete walls overhung with greenery. Most of the glass overlooks the verdant, cascading terraces (above).

be—was that the garden architecture could be continued, in different materials if need be, but in an organic idiom similar to the museum's, making overtures to people of all ages and backgrounds, opening in inviting plazas that lead to majestic inner courts, sunken pools, quiet patios and shadowy walks, with parking hidden beneath and unsightly utilities behind banks of shrubbery.

The museum consequently must be seen not as an isolated tour de force, but as a prototype. The whole complex entity was conceived, quite literally, as a bio-technic megastructure that today, nearly 16 years after Roche began the design, is everywhere green and flowering, fragrant and fresh, unpredictably delightful, as the lordly terraces step upward, each providing a roof garden for the level below, ascending from the lawns of the central courtyard, past lines of pear trees and clusters of lemon, tree ferns and fir, roses, jasmine, bright bottlebrush and trumpet vine, to the topmost platforms where, amidst olive trees and pine, azalea and rosemary, creeping strawberry, hawthorne and myrtle, there are exhilarating views of the lake, the downtown towers and the distant hills.

Thus, whatever else this masterpiece may be, and among other things it is an excellent museum, its chief significance is as a model for a potential civic order which, far from being utopian, was achieved on what even in the 1960s was a modest budget: $4.5 million for the building and $1.5 million for landscaping, which used up the bond issue; and $2 million in contributions for furnishings and installations.

Even if the total of $8 million—at that time the price of a suburban California high school—were doubled or tripled today, it would still be an astonishing bargain for a poverty-wracked, very ordinary city which, when the bonds were passed (at a time when blacks and other minorities scarcely voted), had almost no inkling of what it wanted or actually needed in a museum. For Oakland may fairly be called the hole in the urban doughnut. Like Brooklyn, Camden or East St. Louis, although infinitely more pleasant than those benighted places, it is a "second city," terribly troubled by the pre-eminence of San Francisco across the bay, and so deprived of cultural identity that Gertrude Stein, its most famous daughter, could gibe that "there is no there there."

Although conditions would become worse in the next decade, and only now are starting to improve, Oakland in the early 1960s was already afflicted by unemployment, racism, ubiquitous violence, declining neighborhoods, terrible schools and the panicked departure to the suburbs of many whites, retail business and heavy industry.

'In theory, the continuum of low, horizontal forms and verdurous spaces could go on indefinitely.'

Not for nothing did Oakland become the home base of the Black Panthers, the scene of spectacular shoot-outs, draft riots and political trials in the Alameda County Court House just north of the museum site. The jail at the top of this pseudo-classical, Art Deco pile, built by the WPA, gave prisoners a bird's-eye view of the razing of dozens of older buildings by the redevelopment agency, which cleared the land for the museum. These doomed structures—not much different from those left in the vicinity—were mostly the dwellings of whites, some of them elderly, none of them rich, almost all of whom, if they had the money, would have left central Oakland anway. It is sobering to consider that diehard urban conservationists today (they didn't exist in Oakland then), joined by the now vocal representatives of the poor, would probably fight bitterly to save such housing in a city where more homes are annually declared derelict than are built.

Oakland therefore provided a physical diagram of economic injustice and the irresponsibility of the wealthy: an unlikely situation for serious humanitarian architecture. The most prosperous community leaders, indeed those who pushed hardest for museum bonds and envisaged the building as a sort of club with pictures on the walls, didn't even live in Oakland, but in the privileged enclave of Piedmont. From the *hauteur* of this genteel purlieus they enjoyed sweeping views of the city, as well as very good schools, their own police force, immaculate streets and lightly taxed, fastidiously maintained residences that were solidly built half a century ago by architects such as Julia Morgan and Willis Polk.

How, then, did the museum refute Lewis Mumford's dictum that every community receives the architecture it deserves? The answer is that behind every great building, particularly a public building in an unjust city, there must be an individual who is a great client. In Oakland it was not someone who figured in the society pages of Senator Knowland's *Tribune,* but a dimin-

utive member of the museum commission, Esther Fuller, who with her husband Fenner owned one of the few decent restaurants in town, where artists showed their work. Mrs. Fuller was herself an artist, when she had time, but now all her energies and fiery determination (which she cheerfully attributes to her Armenian ancestry) went into the conception of the museum.

Mrs. Fuller did not yet know much about architecture, but she knew where to find informed judgment she could trust and which would carry weight with other commissioners. On one key point she was already decided: The design could not be entrusted to any of the local firms which had perpetrated Oakland's recent public buildings, some of which stand not far from the museum to justify her opinion. She wanted architects of the first rank; and after a search that took her to almost every distinguished office in the country, she and the museum staff, especially the art curator Paul Mills, drew up a list of 10 firms (later expanded slightly), which was an honor roll of American architecture a decade and a half ago, and still reads rather well. Eero Saarinen from the start was a strong candidate for the job.

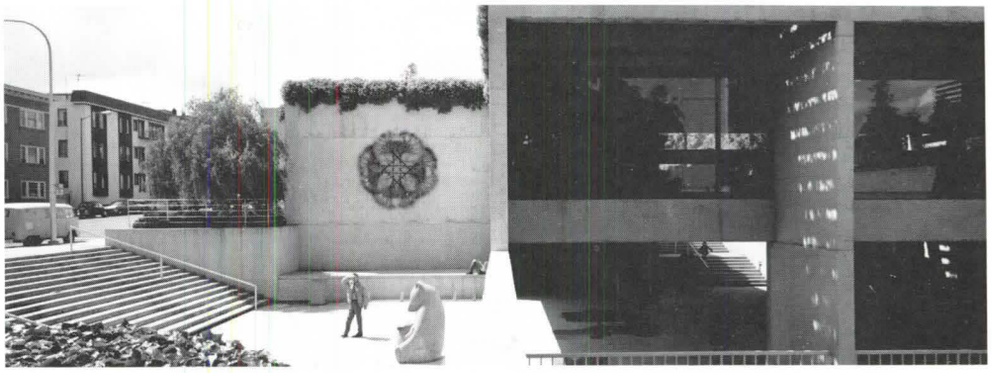
Of the noted designers considered, only Mies van der Rohe, who was ill, could not come for an interview. Most of the others rushed to impress the provincial city, some brimming with à priori notions that would have concocted a version of the Taj Mahal (in vogue at the time) as redone by Il Duce. But in the course of the interviews, which were conducted at an admirable level, a vexing difficulty appeared: There was no program.

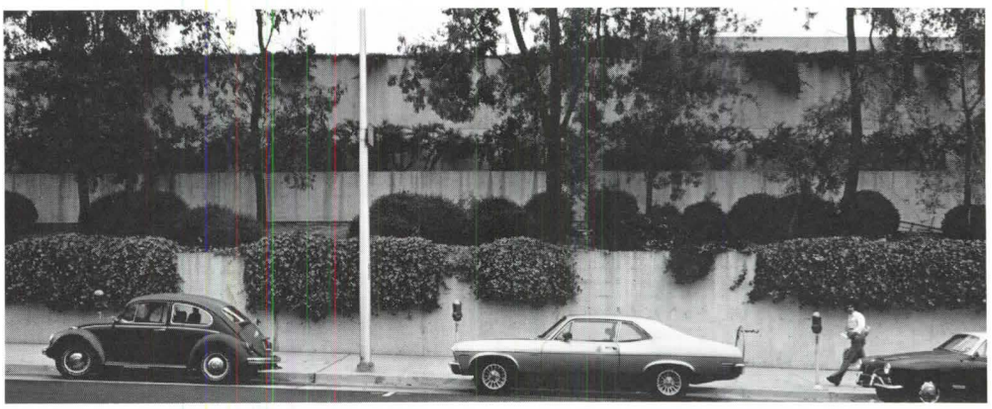
The bond proposal, hastily sold to the voters, had never been properly formulated. Scrutinized later, it was as ludicrously thin as the meager collections it was supposed to rehouse. By first-rate standards, Oakland strictly speaking had *no* collections, but merely random assortments of bay area art, historical curios such as hoop skirts and moth-eaten stuffed animals—with visible patches—that represented natural science. These treasures were on display in three different buildings, administered as separate institutions. History and, less logically, science were installed in old mansions (one of which, the Stanford-Lathrop House beside the lake, at last is being carefully restored). The small art collection was better, containing work by Hassel Smith, Richard Diebenkorn and other leading California painters, but it was not really crowded in leftover space in the neoclassical civic auditorium, directly east of the present museum.

Saarinen emerged from the first interviews as the leader; and he and two runners-up were asked to return for a second round. In the interim he was stricken with brain cancer, and died in less than a month: He was 51 years old. It was then, although Oakland might well have played it safe with either of the architects still in the running, that Esther Fuller insisted that Kevin Roche be given the courtesy of a hearing. Perhaps a more pretentious city—San Francisco, for instance, which was then getting insipid architecture for the Brundage Collection from an aging Gardner Dailey—would not have taken a chance on an unknown. But Oakland had found its architect.

Roche did not so much announce to the city what he could do, as he asked what Oakland truly needed. What was obviously required, in a city changing so rapidly that in another decade the population would be more than 50 percent nonwhite, was not a museum which only an elitist minority would visit, but a new kind of building—transcending traditional museum functions—which could heal some of Oakland's deep social and physical wounds. A parvenu Oakland could never compete with the richer, but hopelessly conventional art museums across the bay, just as it could never be, and should not try to imitate, an international metropolis such as San Francisco.

But Oakland could honestly be *itself,* like any city worth its urban salt. Seen from this perspective, all of the handicaps —the nonexistence of collections, the barrenness of the inner city, the weakness or venality of official leadership, and most demoralizing, the absence of a genuine higher culture that the fragmented community could share—by paradox could be seen as advantages if they were only recognized frankly. They would then become the basis of architecture.





All this is by way of preamble to the development of the design, a turning point in architecture, even though a confused profession doesn't know it yet. Many experts on museums and other consultants were brought in to assist the design team, which included one of the few landscape architects in the country, Dan Kiley, who was capable of understanding architectonic problems on this order and who had worked with Saarinen on Dulles Airport and other projects where the landscaping mercifully doesn't look over-designed. As a New Englander, Kiley had little first-hand knowledge of West Coast conditions, and so he was joined by Geraldine Knight Scott of Berkeley, a redoubtable lady with

sane ideas of design, as well as a thorough knowledge of bay area climate and plants. Together their contributions were immeasurable.

But the main effort came from the Saarinen staff itself (the firm's name would not change to Kevin Roche, John Dinkeloo & Associates for a few years), which pitched in to sustain both partners when grief of Eero's loss hung heavily over the office. It was remarkable, during this trying period, to see the skill and resolution of these young architects, creating—among other things—the famous study models which since the 1950s have been unequalled in architectural practice.

One by one the different aspects of the problem led to the general solution. The arid cityscape almost cried for a garden concept; and half a decade before Berkeley students shouted for a "People's Park," Roche spoke calmly of a *building* that would be a "park for people," where people of all ages and backgrounds—not just counter-culture types (although they were welcome)—would find themselves at home. Such a building, by its very size and purpose, could not escape monumentality, but there now appeared the idea, for the first time so far as I know, of a "non-monumental" or even "antimonumental" monument whose premise was not to impress or overwhelm. On the contrary, it should *belong* even to the humblest citizen, who after all owned it, as he would feel he owned a public park. "The building," said Roche, "must be cordial." This cordiality applied, moreover, to the surrounding urban scene, which has its share of obtrusive, bullying buildings. And so the self-effacing museum would respect Lake Merritt, for instance, by stepping back in low terraces, so that no views would be blocked, unlike the towers which usurp views elsewhere on the lake.

And finally (although Roche saw this possibility early), the terraces—indispensable to the garden concept—could in a single stroke be integrated with the idea of a three-level *regional* museum which, of course, originated in the three separate municipal museums that seemed so hopeless.

But now they fitted so naturally in an ascending sequence, the roof of each gallery becoming a terrace for the gallery above, that the design became inevitable. For this was a museum which could evolve with Oakland itself, as the essentially new collections grew:

(1) On the lowest level, closest to the earth, there would be a gallery devoted to the nature of the region and the varieties of life it supported: in other words, what providence had given to northern California, from the Pacific to the Sierra. This

The three major galleries, from the top: art; history and technology; ecology.

was proposed a full decade before the U.S. was swept by the ecology movement. (2) But human beings alter the earth; and on the next level, appropriately, a gallery of history and technology would show how people and institutions, machines and social and political life, have changed the region, from neolithic Indians and Spanish colonists to the Gold Rush and the industrialization of an urban northern California. This has turned out to be the gem of the museum, a miniature Smithsonian, which surely ranks with the transportation and communications museum at Lucerne, Switzerland, as one of the best things of its kind.

(3) Yet, there is a higher level of human expression: the creative arts which one day may provide a *summa,* or *ethos,* in this part of the world that everyone may share. What is more, as the visitor steps out of this topmost gallery of painting and sculpture, photography and other media, there is a breathtaking view of the supreme regional work of art—the still imperfect, but magnificent metropolis surrounding the bay—and the great flowering museum lifting and falling on every side to show what it all might be.

Once this extraordinary program was established, all the other elements of the design fell easily in place. Spaces for temporary exhibitions were provided at the northern ends of the three superimposed galleries; to the south they were flanked by a great hall for major shows. Curators' offices, with charming private patios, were placed beside the galleries. Overlooking the southern side of the central courtyard was the restaurant and its terraces. Classrooms for school children were tucked into the lowest level, beside the sunken pool with its lilies and water reeds and golden fish, where there would be a warm play of changing light. A theater was put in the southeast corner. The garage was located under the high end of the building to the west.

Three museums were made one and the roof of each gallery made a terrace for the next.

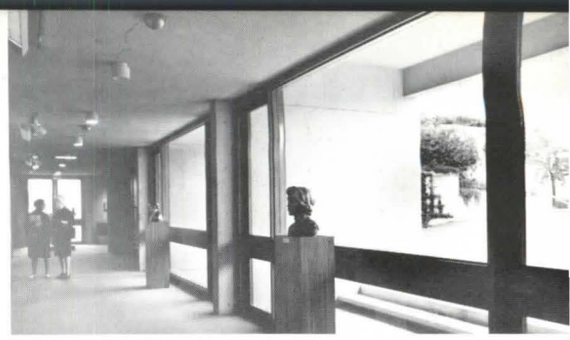
Gradually, after a point when most firms would have thought the design completed, the museum became architecture. Grand staircases and walks joined the complex together, intersecting in plazas and courts, threading through gardens, passing beneath parts of the building that spanned broad promenades, so that there were always transitions from light to shadow, and then optimistically into light again, as the great space of the main courtyard opened, framed by the architecture into an amphitheater where Mozart or rock could be played. Into this tremendous composition the court house and civic auditorium were brought almost humorously, as foils for the museum's new premise of what a just public building should be. And always there was the city beyond, placed in a new urban focus.

To achieve such richness of effect the architects relied only on the natural wealth of the planting and trees, and on the sparest of palettes in the actual building. Only three materials—reinforced concrete, plate glass and wood—were used throughout the construction. The concrete was sandblasted, inside and out, making it a soft, powdery background for all kinds of art and other exhibits, and a lovely surface for rosemary or ivy spilling down over the walls. The tremendous windows and glass doors, in which Roche's unfailing command of proportion and scale is consistently revealed, were all framed in oak. Only in trellises and arbors, carrying bougainvillea or wisteria, ficus or honeysuckle, where oak would not stand up to the plants or the weather, did he turn to rough-sawn redwood, with a strength and majesty that had not been attained by the local bay area school since Maybeck's Christian Science Church.

As construction progressed in the mid-1960s, the whole generous vision seemed to be coming true. Then it was discovered that a roofing subcontractor, who later went bankrupt, had not succeeded in waterproofing the planting beds. The building leaked; and a bitter quarrel followed, in which the architects were certainly not wrong, but were wronged by a city administration that had never grasped what kind of architecture it was receiving. A piranha-like bureaucracy had long been nibbling at the building (and, alas, still does today); and, in the name of safety, city officials demanded handrails in the center of staircases rather than at their side, and all kinds of silly railings and barriers that started and ended nowhere, sometimes in the middle of shrubs, so that gardeners would not fall and hurt themselves in an earthquake.

Finally the differences became irreconcilable, and the longstanding deficiencies of Oakland, always lurking at the perimeter of the project, erupted in ugly ways. The upshot was that the original design group never finished the building; and this had lamentable effects on the interiors. What they might have been, had Roche kept on with them, perhaps together with Charles Eames, can be guessed only from the exquisite proposals for the National Aquarium in Washington, D.C., on which they collaborated in 1966. That design developed in many ways from Oakland; and it was carried very far before it was killed on grounds of economy by a House committee headed by—of all people—Wayne Hays.

But not everything was lost in Oakland.



Blemishes: The handsomely proportioned doors facing the terraces (top) are kept locked, frustrating the intended flow of circulation between indoors and out. The grandeur of the great hall (above) is all but hidden behind obtrusive lighting fixtures, acoustical tile and other appendages.

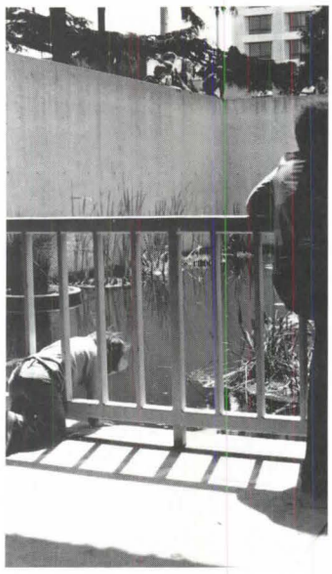
Fortunately, Gordon Ashby, who had worked with Eames, and understood Roche's intentions, was brought in to do the science and history galleries on the first and second levels, and he did an exemplary job. A captious critic might object to his use of walnut for furniture and displays, rather than oak which would have complemented the architecture; and the lighting also seems too restless, dropping below the ceiling coffers to disrupt the architectural volume, and detracting from the intricate play of the structure overhead, where forms step upward and downward in alternating patterns, expressing the movement of stairs and the slanting lawns of the terraces above, and leading to see-throughs from level to level that the staff today keeps mainly closed. Otherwise, especially in the stunning history gallery, Ashby is hard to fault. He has responded to the building with wonderful wit, displaying a hand almost as deft as Eames' own, and a highly civilized intelligence. I only wish that the most recently installed spaces, by Ashby's former assistant Bruce Collins, had been

as good. But they are terribly cluttered, and much less selective toward artifacts, so that they seem like parodies of the Eames approach.

In the topmost art gallery, the tallest of the three and potentially more handsome than the others, the museum's own curators, led by Paul Mills, decided to do the interior themselves. Mills had been extremely helpful in the basic planning, but as an amateur designer he committed many errors, erecting false walls that interrupt the flow of space and chop up the room's proportions; and he also studded the floor with cumbersome oak mountings, like little billboards, which display paintings on one side only, and simply block views on the other. All this should be redone, as well as the lighting, which belongs in some department store.

But this was a minor misfortune compared to the calamity perpetrated in the great hall. When Roche left it unfinished, this aristocratic room had the solemn grandeur of an Irish baronial castle. At one end a heroic staircase, cantilevered from the wall, was its single sober adornment, while overhead the girders of the structural ceiling formed massive coffers. For reasons that remain baffling, although ostensibly they were attacking an acoustical problem caused when they installed a hardwood floor, the Oakland firm of Mackinlay/Winnacker/McNeil & Associates tarted up this masculine space as a giant boudoir, with movable chandeliers festooned with hundreds of small bulbs. To compound this mistake, they concealed the structure behind cheap acoustical panels, not only the upper walls—where tapestries might be hung—but the magnificent ceiling, too, so that the great coffers have vanished.

Where architects left off, the city's personnel took over to mar the building in smaller ways: plunking down concrete refuse containers of the wrong size, shape and texture; using ceramic cigarette urns as doorstops for the noble portals; strewing the restaurant terrace with metal furniture that looks acquired at a garage sale; protecting a skylight (through which a teenager had managed to jump) with a ponderous redwood coping that is no more effective than a hidden metal grille would have been, but manages to conflict with both the architecture and Claire Falkenstein's wall sculpture above it. Worst of all, perhaps, was the fencing of the pool with a barrier through which small children, whom it was supposed to save from drowning in two feet of water, manage to slip with ease.



The city's choice of such items as railings, outdoor furniture and waste receptacles did little to enhance the museum's design.

Yet these transgressions fade before the exhilarating splendor of the gardens, lovingly cultivated by a saintly public servant, the chief gardener Bruno Filardo, who with two hard-working assistants is struggling to maintain five acres of planting in the midst of one of the worst droughts in California history. As the garden has matured, it has grown lusher than anyone anticipated; and it is becoming one of the horticultural pilgrimage stops of the world, like Sissinghurst or Villandry. Miraculously the garden has withstood even the loss of a stand of three immense atlas cedars (*cedrus atlantica*), planted in 1911 when the civic auditorium was built, which Roche made the glory of the central court. These astonishing evergreens, which an architectural renderer would have given anything to draw, perished during the museum's time of troubles in the 1960s, when the new lawn was heavily watered, and these semiarid trees died for lack of drainage. But the fast-growing deciduous alders which have replaced them are now crowning out, and seem acceptable enough.

At any rate the people think so. They come by the thousands (in spite of the city's imposition of an admission fee to the galleries). And to appreciate the museum it is best to come on a Sunday, when whole families arrive from the affluent hills and the plebean flatlands, intellectuals from Berkeley and hard-hats from San Leandro, curious San Franciscans and foreign architects, Chicanos and Chinese, native Americans, hippies, squares, artists, old people and, above all—for this is Oakland's hope—black families and white families side by side, sharing a gift of architecture.

The children are irresistible. They race

on the lawn, swing on the trees, hop on the parapets. They use Peter Voulkos' tubular bronze sculpture as a slide. They set George Rickey's giant red scissors in motion and send them flying back and forth above the court. They do not notice, as an architect might, that it is not very sensitively placed, and probably not a fine enough vertical element to contend with the great horizontal lines of the building. Nor do they care that the petrified log on which they climb and play is clumsily installed, and furthermore one of the few science and history exhibits in a garden that is almost exclusively dominated by sculpture. This was not what the architect had in mind.

But neither they nor their parents realize how many possibilities of the architecture have not been fulfilled: that they can enter each gallery only at one end, for instance, and leave the same way, because the security men have locked the garden doors, even though there has been little pilferage (in a museum where almost everything is replaceable anyway), and almost no vandalism since it opened in 1969. Roche hoped, of course, that there would be cross-movement in the galleries, with people entering and leaving at will through the garden doors to refresh themselves on the terraces, as one might go outdoors to a garden from a home.

No matter. Someday the museum will be cordially used everywhere. A decade is only a moment in the life of a great institution or in the life of a city that can be great. The collections are growing so quickly that the museum suffers from an acute shortage of storage space and work room for preparing exhibits, something no one could have predicted when the design was conceived for a museum that had no collections at all. The curators grouse about this, just as they complain about many minor technical difficulties; and there is talk about acquiring extra service

and storage space in nearby buildings, even though it might make more sense to create storerooms and workshops in the big garage, where stalls are simply rented by the month, and let cars park somewhere else.

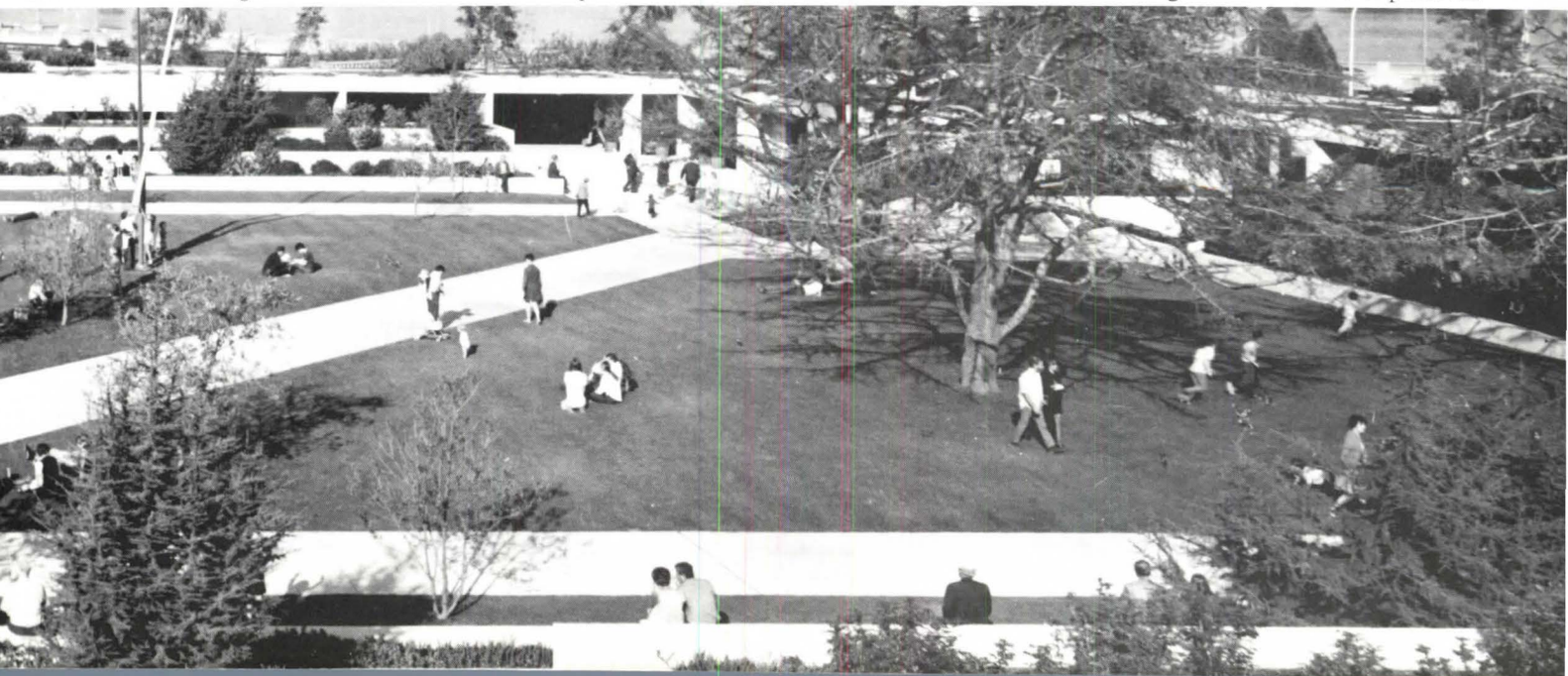
But the crowds moving happily through the galleries do not care, are scarcely aware, of such matters. Their verdict is Yes, everything seems to be going well, or well enough, as they applaud musicians and dancers, and eat and drink at the ethnic festivals in the great courtyard: Greeks and Russians, Latinos and Japanese, as well as Indians who set up tepees on the grass. All this is a part of the museum's outreach operation (once bitterly opposed by conservative politicians) that is run by Ben Hazard, a black artist in charge of "special exhibits," many of which take place in other parts of the city, such as the awards ceremonies of the Black Filmmakers Hall of Fame that are held each year in the restored Paramount Theater, a marvelous Art Deco picture palace that was empty for years, and now is the home of the Oakland Symphony.

There is an undeniable sense of an expansion of life, an enlargement of human possibilities. But is this not what modern architecture, from the days of Sullivan and Wright, Gropius and Corbu and Mies, has ultimately been all about? And isn't that what the architectural profession (and even worse, the architectural schools), demoralized by enormous social and physical problems that seem beyond control, has tried to ignore or forget in the 16 years since the museum's design was begun?

Modern architecture has been experiencing a bad failure of nerve, simply because—in an age of Vietnam, Watergate and the decline of cities—architects have been afraid to think of the full potential of the future, just as they have failed, intellectually and spiritually, to renew the movement's founding principles.

But the future is open, and modern architecture may be perennially new. "The architect," said Kevin Roche in one of his rare written statements, "is a servant of people. He leads, if he leads at all, by showing what is possible in creating an environment. . . . There should be no limits. He should move to this end using every energy, asking every question, exploring every possibility." Any architect who can understand this will rejoice that he is not living in another time or place. □

An early photo of the busy and generous court in its near-original condition.



A Conversation with Mumford: 'The Human Things Are Ignored'

He feels that architects 'have victimized themselves' and fears that the ecological pendulum may swing. By Jane Holtz Kay

"And now I smile a wintry smile," wrote the mature Lewis Mumford, peering down the peaks of age at his younger self. But the season is autumn, not winter, with the man of Amenia, N.Y., who meets you outside his modest farmhouse. At 81, Lewis Mumford resembles a cordial tweed-jacketed don. Articulate as ever, working steadily, our premier architectural humanist is rounding out more than his alloted span at high productivity and you need only visit here to see the plans and projects for the next years graphed so clearly they might be a time machine. "Mother died at 85," Mumford says quite casually early on, and the implication is clear; the time given graciously for our interview is a pause in the day's true occupation—writing: first, another *Findings and Keepings* ("analects for an autobiography") out next year; then the long-awaited autobiography. Then, and only then, will the architectural writings of the century's finest architectural critic and most cosmic urban historian be harvested and sheathed.

The hours spent at his desk on the morning before our interview—as every morning now—yield only 1,500-2,000 words. These will be polished to a Mumfordian gloss. This brisk afternoon hatched our interview, of course; but most afternoons are for solitary walking or musing with his wife Sophia, letting the ideas germinate in the not-so-secret garden of a mind that has produced 25 books, spanned our whole built civilization with classic commentary and is of such relevance still that "only a couple of my real books are out of print—and 50 years is a long time, especially in this country."

As has been said, his is the final ordering of an orderly life. As has also, less charitably, been said, his is the life of a 19th century intellectual in small-town America. ("No, I'm a big city man," Mumford protests.)

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Either way, Lewis Mumford—a pioneer of a whole architecture come into his own in a whole earth era—is no pseudo-Waldenist disconnecting the TV in Duchess County. If the drive (100 miles from New York City or 170 from Boston) ends with a turning in at the Richardsonian clock tower and a 130-year-old house that seems a journey back in time, the landscape belongs to our day: The billboards, the yellow-toy John Deere trucks, the outlines of the robotized barns, the ranchhouses with black jockey statuettes perched upon their lawns and the railroad station to which no train comes are a newer Berkshires. "I think most of the things that have happened in the last 30 years have been negative achievements," Mumford says. Amenia, though beautiful, is proof enough.

Lewis Mumford is a man whose view encompasses a whole century of life upon this landscape, and it is his sense of history that comes on you first. From Ebenezer Howard to the morning news, Mumford sees—and uses—seven or more decades simultaneously to make his moral judgments. And since time neither softens nor assuages the truth of the instant to the historian, Howard, garden city

He is no more an architect or planner 'than if I wrote about criminology I'd be a criminal.'

founder, is alive in all his heroic stature; and Jane Jacobs' casting blame upon him for all urban blight remains as ill-advised as 17 years ago. Time past, time present, in talks at lunch through the late afternoon, the conversation bobs from early-century Greenwich Village to a recent air crash; from this season's energy follies to life in the 1920s-planned community at Sunnyside.

For those half Mumford's age, for journalists versed in the yellow instant, for architects retooling for Right Now, this time span is only one of many fascinations of the man.

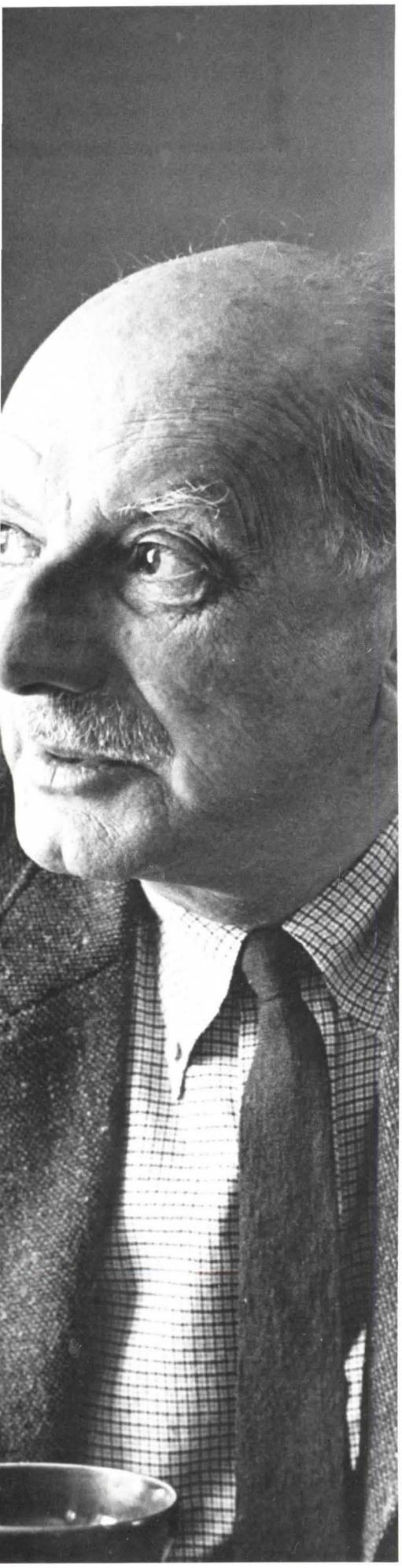
Mumford has kaleidoscoped so much of urban and architectural life and history—the first to write about the Chicago highrise or Olmsted in this century; the voice of the still-pertinent Regional Planning Association of America of the '30s; the creator of pioneer and massive surveys of urban life; the prophet of the environmental/ecological movement—he has so dominated the literature of the built world that architects forget his scientific and humanitarian place, not the least of which as public conscience of pre-World War II, Vietnam and whole nuclear generation.

Still, it comes as some shock to hear Mumford slough off his architectural role as he lays out his latest work; in *Findings and Keepings,* Mumford says, he will exclude architecture, the city and technology. "I wanted to kill my architectural reputation," he adds mildly. A free-lance humanist and the last (or will it be the first?) of the age of generalists, Mumford dislikes the straightjacket: "I'm identified as an architect and planner," he complains. To the contrary, he is "an outsider, an amateur," not a professional designer, "any more than if I wrote about criminology I'd be a criminal." It is not a joke.

"To me, it's a dull subject. I don't think architecture is going to influence America," he goes on. "The world has to change to influence architecture." True, during his *New Yorker* tenure from 1931 to 1962, "I looked at a great deal of architecture." No longer so. He does not seek new buildings either in conversation or travel. "Part of my economy," he says. "I don't look for things unless they come after me." Yes, there's decent design work done, he says lukewarmly, "but none that makes a splash. I think most large-scale housing has been a failure." As for what passes for new towns—"I know enough about Columbia and Reston to know I wouldn't want to see them."

Architects, Mumford feels, "have victimized themselves. Corbusier's concept of the ideal city was a stylistic concept and the architects fell for it on esthetic grounds without asking what kind of life went on there—and because the road to financial success was dealing with those entrepreneurs who wanted to do so," he adds. The highrise began as advertisement; "they're bad advertisements now." Such criticisms are less polemics than asides, however. A dull subject. Mumford recently taped nine half-hour chats for the BBC. In the one most focused on architecture, Mumford critized the more sterile aspects of the modern movement and dwelt on early work.

Admitted or disclaimed, the man who insists today that "I never did it systematically" is credited with "reinterpreting Olmsted and Roebling, re-establishing Richardson, pointing out the significance of Gill and Maybeck and the Chicago



school," as the biography in *Roots of Contemporary American Architecture,* a collection he edited in 1952, put it. "In 1923, he offered perhaps the first course on the history of American architecture, and when no one came, he turned his course into the book *Sticks and Stones* in 1924." The concern never abated. It expanded in the landmark syntheses *Culture of Cities* (1938) and *The City in History* (1961) and is reconfirmed in last year's reminiscences of Clarence Stein (AIA JOURNAL, Dec. '76) and Benton MacKaye.

To architects, Mumford's presence on the landscape seems such a natural force that they forget how rare it is that an American intellectual should perceive the built world as core: Alone in this country's life of the mind, Lewis Mumford has had that mystical property, "an eye." Who else has cast his scholarly perceptions in the living color of a time as he did in the multidisciplinary *The Brown Decades* with its brownstones, dark walnut furniture, somber wallpapers—its brown that was the color of Lincoln's mourners? "The inner world colored the outer world," Mumford wrote from the first. Uniquely, he has seen that the physical environment is both source and center; that "nature as a system of interests and activities is one of the chief creations of the civilized man"; ceaselessly, he has railed at the "vacuous expansions and explosions" against it.

Laying down formulas of horticulture with those of city design, he asked, "What is a beautiful city with bad drains or a fine concrete highway in a barren landscape?" and knew that a "money-controlled and power-intoxicated economy" surely would unravel the best that Pure Design could do.

At 81, then, Lewis Mumford has paid his dues. If he wants to escape the confinements of the field, that says more of the state of architecture than the state of man. "The architectural designs that are more and more powerful conform to one side," he says sadly, sitting in the sunny, human-scaled dining room this day. "The mechanical and technical support systems are uppermost and the human things are ignored."

We have finished a leisurely lunch and the spoken words have less sting than they might, but the tone and the concern are no more resigned at 81 than the written words at 21, 31, 41. "It's been so nitwitted," Mumford goes on, "our faith in systems is pathetic." We are like those passengers in a recent air crash who believed that the pilot would release them and sat blind and docile to the last, he says. "If they had been a little more panicky, they would have gotten out." The plane crash is not a bad metaphor, it turns out. "You have to have a lot of hope and faith to fly," he says. Mumford himself rarely flies and doesn't drive. "I've never been pressed for time," he explains the former. "Never *let* myself be pressed for time," he adds firmly.

Mumford did fly recently to Paris to receive the prix mondiale, and a year earlier was given the Knight of the British Empire. (The Nobel literary award has never gone for nonfiction, he reminds you.) Countless awards and honors have dotted his life, of course. But his last work was published in a perfunctory way and his 80th birthday passed with a published collection of *Architectural Record* columns but scant note compared to that given to, say, Buckminster Fuller, the self-advertising saint of technological optimism.

Though sometimes compared to this fellow octogenarian, Mumford's aloofness—and perhaps his more pessimistic cast—account for the fact that despite far greater literacy and a similar global view, he is less popularly known.

Still, more notice comes of late. The environmental movement is the hope that lights the tunnel and the cause that brings the young. "It really has been heart warming lately," says Sophia Mumford, wife, intellectual companion, life-support. "Over and over again, young men saying 'you've changed my life,' " she observes with a smile. In England, where his link to Patrick Geddes and Ebenezer Howard and his coparentage of the new towns movement adds to the reputation of his written works (and where, not incidentally, architecture is a public art of higher standing), he has received a more elevated place, witness those BBC tapes.

He remains 'optimistic about the possibilities but pessimistic about the probabilities.'

No question, though, Mumford's writings with their mix of ecology and earth design, their prescience and grace, attract and will attract still more of this rooting generation; after all, there is nothing like prophecy-come-true to amaze those ignorant to the fact that history repeats itself.

The new environmentalism won't stop Mumford's unease, of course. He fears the swing of the ecological pendulum. He describes the stoppage of a dam "to protect an almost unknown species of marine animal. Species are always going out of business," he says, matter-of-factly surveying the eons. "Of course, you shouldn't do anything wholesale. But this is the kind of thing that will make ecology unpopular."

If this sounds pessimistic, it is vintage Mumford, acerbic but persisting; or, as he likes to put it, "optimistic about the

His life and work fuse in a modest, graceful, comfortable house in quiet Amenia, N.Y.

possibilities but pessimistic about the probabilities."

Indeed, talking to Lewis Mumford is much like reading him. "Art Deco! Who ever heard of Art Deco?" he says contemptuously. "It's a stupid name for a very inferior decoration." He is equally scornful of the shoddy neo-Victorian claptrap favored by franchisers. Naturally so. Mumford the writer declared years ago that "dead forms do not produce living organisms. People who attempt to restore the outward form of tradition really deny both the validity of tradition and the integrity of the society in which they did live."

As Mumford's casual words parallel his written ones, so his everyday life parallels his public preachments, his private life seems as graceful as his manners, as capacious as his prose. Antimaterialism certainly does not preclude the amenities: Lunch by his wife is a superbly cooked white-wine meal. Their home, built in the compact scale of the New England farmhouse, is modest outside, but commodious in a quiet rambling way within. Its proportions fit the rows and rows of books that hide the walls. (Someone said the 5,000 volumes support the roof, Mumford says wryly.) The furnishings, unlike the city chic of his earlier urban life, are comfortably nondescript; closely quartered for chats in the living room—a brown decades place, mellow, dim, punctuated by yellow lights under woven shades. The kitchen and dining room are more open, airy places with a Japanese scroll on the wall and views of Sophia Mumford's garden through the soft yellow curtains.

Though not far from MacKaye's Appalachian Trail, there is nothing Sierra Club about their Berkshire home. Backpackers might take exception to the links to the mechanical age (electric toothbrush, Sophia's electric typewriter), but they are as natural to the man as the Cambridge garb of tweed jacket, brown sweater, black socks, polished shoes and one of a wardrobe of narrow tweed ties. When visitors come, there is no affectation. Like Thoreau in a Walden close enough to dip into his mother's cookie jar, Mumford is within reach of the good things; like Thoreau bringing Concord and Cambridge intellectuals to his retreat on Sunday jaunts, Mumford could not survive in unbookish Amenia without intellectual imports or expeditions.

The study off the living room is a more workaday place—Shaker in its lines. "A small room has to be shipshape," says Mumford. One window lights the immaculate space with its '30s blond-wood chair. The gray desk lines one wall. Clips on a string dangle (if the word is not too frivolous) their precise right-angled notes. The disorder of a cardboard file with the coming chapters of *Findings and Keepings* offends him. It seems as immaculate as the rest. When a Rorschach tester took this master synthesizer through the standard inkblot trip, he was staggered by Mumford's description of one meandering blot as a decentralized yet united museum. "No one man had come near correlating so many things," the tester said. Still the correlator's Spartan shop shows not a trace of such "things."

The shelves outside show more signs. "It's a generalist's library," Mumford explains. "In no field is it complete." Incomplete but impressive, the library ranges from Mills to Daniel Ellsberg, from Thomas Mann to Ghandi. There's even the latest polemic on plastic food, the Hess' *The Taste of America,* tucked into a bathroom shelf.

Mumford's life and work are of a piece and even hard times tend to fit (if not always happily) into some larger moral tale of good and evil. This winter, for instance, their first passed in isolation in the farmhouse in Amenia, was the most difficult—with its unremitting cold and snow and the pipes that froze, forcing the Mumfords to melt buckets of snow. That too will serve as lesson as winter memories recede and spring flowers come. "We're lucky because we're not dependent on any one source of energy," Mumford says. There's oil for central heat, gas for cooking, electricity, the wood-burning fireplaces, he says. "It shows you the importance of not having too much reliance or money in one system."

Mumford's theories work in daily ritual and could prove doubly workable for our national life. "I don't think there's been any direct result of my work," he nonetheless maintains. Perhaps that is yet to come. Such things as decentralized towns built outside St. Paul, Minn., please him. "They may not have ever heard of Lewis Mumford or the Regional Planning Association, but still. . . ." The chain may be imperceptible, but it holds.

Certainly he did not try to forge a more visible link. When a dismal shopping center was on its way to Amenia, Mumford's counsel was not sought, but neither did he volunteer it. This has been his choice, of course, since more political days as spokesman of the RPAA. Other members of that group—Benton MacKaye with the Appalachian Trail, Clarence Stein, Henry Wright, Stuart Chase—moved through the public sphere. RPAA member Catherine Bauer, a housing advocate, "admired the hardboiled practical approach." That admiration led to a divergence from Mumford, the man of ideas. Before she died, she regretted this approach, Mumford says now. She wished she had spent more of her life exploring rather than doing. It is clear that Mumford sees this as one more proof (if need be) of his own proper distance from the fray.

Mumford's relations with the university world have been distant too, if more regrettably or ambivalently so.

"Please refer to me as *'Mr.,'* not 'Professor,' " he instructed British new towns advocate Frederick Osborne years ago. "The latter title covers but a year of my life; and if anything, I am an antiprofessor in all my ways and works. . . . Philosophically speaking, I am a deliberate anti-expert; and I have spent no small proportion of my life exposing the inadequacy of the single-track thinking of the expert." Meanwhile, Mumford maintained a connection, whether at the University of Pennsylvania, Stamford or MIT, as essential to his three-part self-support. Foundations, universities and publisher put bread on the Mumford table.

The love-hate link endures. "I've had very little influence among the professions who went the other way," Mumford notes. The humanities have no traffic with him, he says. The scientists more. Urbanists and architects don't deal in whole issues. And design schools, well . . . "there's no, 'head and shoulders above,' " he dismisses my grading of two such schools. Is there more concern with cities

In this violent society, 'we live on top of a volcano and pretend it's a glacier.'

lately in academic life? "There's much more *scholarly* attention," he emphasizes, "but much of it is a barren kind of statistics, putting it on computers." In visits to Cambridge, young people come to him with classroom projects and problems, he observes, but his question—"Have you seen the site?"—still produces the same old "no." He shakes his head. The pointed white brows arch above the pink cheeks.

His distaste is almost moral. "There's a kind of caginess and also an academic caution to speak up only about your own discipline," Mumford goes on. He tells of making an antinuclear statement a number of years ago. "It's very interesting," a university colleague commented, "that the city planning department is involved." The man could not see that it was Mumford human being, not Mumford specialist who had testified. "This is a curse," the whole man declares.

Universities, like architects, like the

century, have taken appallingly long to catch up with this human being. The elegant integrity of his mind makes Mumford as worth hearing on the latest topic of energy as on last year's environment or the year before's hot issue.

"It's so simple," Mumford resolves the current energy crisis. "There's enough energy for life." He has said this before; it is a primer. "I make the very simple, elementary statement that any child could make: The problem of using solar energy was solved with the beginning of life." He talks slowly, patiently. "The first unicellular creature was converting solar energy into living tissue, and the growth of plants was the permanent answer. There's enough energy generated by the sun to solve all our genuine needs. It will mean a different kind of agriculture, different areas than we use, a less exorbitant use of energy," he says. "All energy is just using plant life." Oil, that organic matter compressed over the millenia, is the earth's horde spent too profligately. "We've been eating up our capital. Now we must live on income."

Universities, designers—all—could show us how, he feels, and his random thoughts give ideas aplenty, early and late, from the small gardens planned in a new course at the University of Pennsylvania; to the English new towns where agricultural productivity rose when the country estate became backyard gardens a generation ago; to still farther back when Boston was ringed by market gardens. Such small-scale supplements would enrich our urban areas, Mumford thinks. Though Jane Jacobs misread his aim as hollowing out the cities, and his fixed ideal of 200,000-500,000 people does indeed seem smaller than current thoughts, it is the city that is hub for Mumford's fuller life.

Amenia is a decayed "country townlet," so the Mumfords' daily environs reinforce such thoughts. "Poor Amenia is becoming a mess," Sophia Mumford sighs as lunch nears its end. Undergrowth clogs the Mumfords' walks through the nearby pasture, depriving them of "wonderful views." The cows no longer munch the brush because they languish in their wired barns, taking their meals by mechanical means—a disservice to man and beast, the Mumfords feel. "This will be woods in 10 years," Lewis Mumford grieves. It is the farmer mourning the wilds that claim the hard-tamed lands. And, of course, it is the writer who has declared that "the continued culture of the land and the culture of the mind through the land is the mark of a high civilization."

Microcosmically again, there are "heartening" signs from the next generation, even on this landscape. Sophia Mumford tells of the high school students who came to quiz her husband about the shopping mall. "They were so open and eager," she recalls. You picture the jean-clad youngsters arriving at the Mumfords' yellow door. In they came, moving through the small entry attending the welcome of the sage old enough to be their great-grandfather. And Lewis Mumford, greeting them pleasantly, sitting them down. And starting them back. And back and back and . . . Mumford saying, "Let's not begin with the shopping center," in his benignly even way. "Let's consider the whole of Amenia," as he went on. "What has happened to it and what can we do to take hold of Amenia."

"The shopping center was placed on agriculture land," he explains now, telling how he broadened the students' fragmented acres to a whole earth. "There again, the young are changing," he says with pleasure. "Their fathers never would have listened," Sophia Mumford (above) choruses. Then, she tells a second story from the town: of the cast-aside local school marm who suddenly rose to become a valued elder when her memory was needed as repository of Amenia's past. The teacher's mental land bank held the information of where an ore pit once sat, or a stream flowed, that was essential to a town report.

Photo © Jill Krementz

Needless to say, such signs do not completely dispel Mumford's well-known unease, especially when personal memories are tinged with sadness. The Central Park where Lewis and Sophia courted in the '20s is a combat zone and "this applies to a hundred other things," he says. "I'm an old New Yorker," Mumford reminds you. He gained the habit of architecture while looking at tenements with his grandfather in the city. "But New York is a foreign and repulsive city to me now." The same is true on the larger scale. "We're nearer to disasters because we have an atmosphere of violence. There were all the same signs of violence in my day but now these things exist in great quantity. Young people don't think it's an abnormal state; they think it's a *normal* state," he says, and the gloom takes hold. "We live," he pronounces, "on top of a volcano and pretend it is a glacier."

In his private life, Mumford maintains his balance on this volcano. He faces his ninth decade with composure. His personal moments of nostalgia for the old days when pen and paper sat by the chair, the table—here, there, everywhere, always at hand to receive the cascading thoughts—are soothed by Sophia, a breadwinning partner of his youth, the amanuensis of his old age. Mumford's "consciousness that the organism weakens with age" was mollified by an extra decade and a half at peak powers—15 years beyond the span he had expected life to allow, he says. The work goes on amid the wholeness of an integrated life. Lewis Mumford has pursued his perceived duties unflinchingly on the highest moral and intellectual plane and today his satisfactions seem the fulfillment of the search plotted more than 50 years ago:

"The usual wishes for happiness are always a little banal," he wrote Sophia on her birthday 57 Octobers ago, "because people do not know what they mean when they talk about happiness. They think it is pleasure, comfort, or 'having all you want in the world,' and they are disappointed when they find that these things have as much capacity for producing misery as for creating anything else. When I say that I wish you happiness," he declared, "I mean that I hope as you grow older you will become more intensely alive."

In the sense that he defined it, today's intensity bespeaks a continuing content: Lewis Mumford has worked and continues to do so. He is comfortable on this glacial corner while retaining the conviction of the infernal price our practices upon its landscape will exact. □

The Case That Buildings Often Resemble Their Architects

'There are clues in art and architectural history and in semantics to confirm this relationship.' By John Maass

According to H. H. Richardson's biographer, Mariana Griswold Van Rensselaer, a German admirer of the work of the huge-sized Richardson exclaimed upon meeting him, "Mein Gott, how he looks like his own buildings!" In an article written in 1891, the critic Montgomery Schuyler told the same story with a Dutch tourist saying, "Oh Mr. Richardson, how you are like your work!"

This twice told tale is not a joke, and this essay aims to show that a marked resemblance between an architect and his buildings is, in fact, a frequently seen phenomenon.

There are clues in art and architectural history and in semantics to confirm this relationship. Vitruvius declared that the proportions of temples should correspond to those of man. This principle was widely known during the Renaissance when Leonardo and Michelangelo were among its believers; it has also surfaced occasionally in more recent times. Among art historians, Heinrich Wöllflin noted that "architecture, like clothing, is an outward projection of man and his feeling of the body," and Geoffrey Scott observed that "architectural art is the transcription of the body's states into forms of building."

This relationship is also reflected in common phrases. We speak of "a towering figure of a man," of "a well-built athlete," of General Jackson who "stands there like a stone wall." Such comparisons are found in a range of sources from *The Song of Solomon* ("I was a wall, and my breasts were like towers") to American slang ("she is built like a brick s...house").

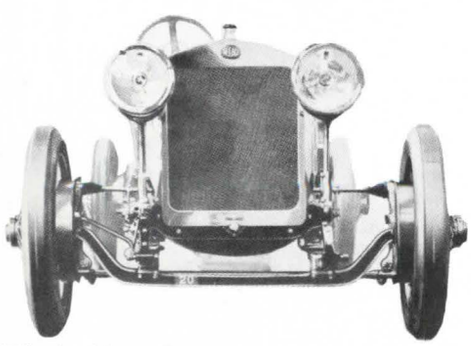
From psychoanalysis we know that in dreams architecture symbolizes the male or female body. Freud provided a substantial list of architectural metaphors for the body and its parts: houses, ledges, balconies, rooms, doors, gates, churches, chapels, stairs, windows, citadels, castles, fortresses, towns, cupboards, stores, rotundas.

From linguistics we know that many building terms derive from anatomical terms. House, for example, derives from hide, meaning skin. (The link is more obvious in the German language with *Haus* and *Haut*.) Other such words include capital and capitol (head), skeleton, rib, spine, footings, column (neck), facing and facade, window (wind eye), gable (from the Greek word for head), groin, parapet (breastwork), cheek, knee, jamb (leg), podium (foot), dentil (tooth), gargoyle (gullet), header, chimney breast, hip roof. Some architectural elements are named after articles of clothing: cornice (crown), coping (cope), chapel (cloak), bracket (breeches), hood, mantel.

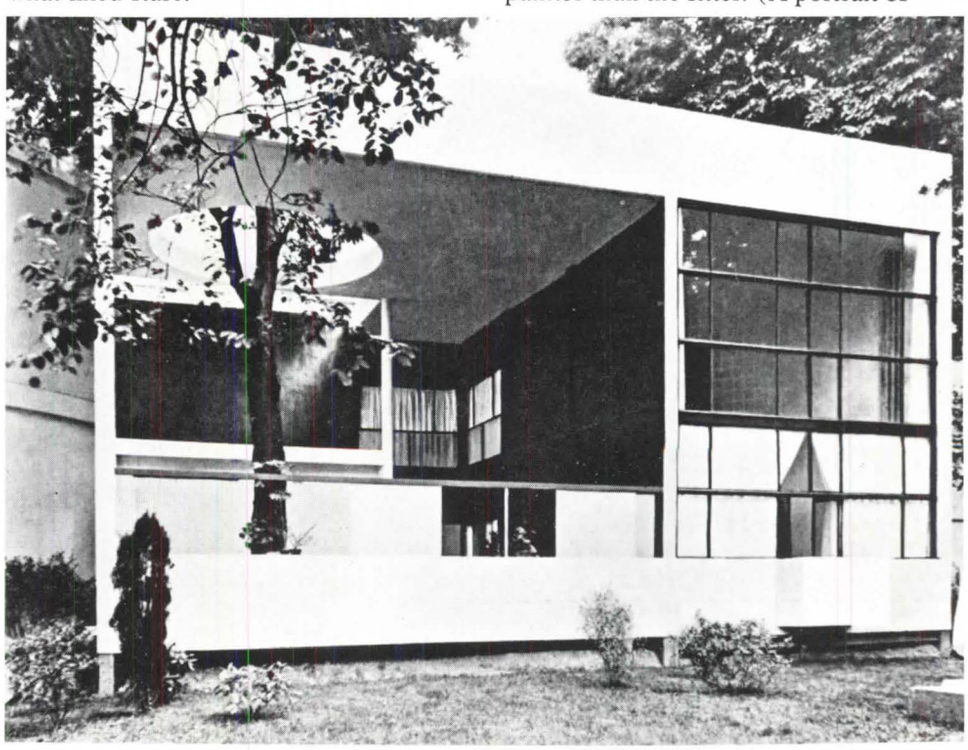
From graphology we know that handwriting reflects not only the writer's character but also his or her appearance. Superior graphologists can describe a person from a handwriting sample in remarkable detail. Handwriting, drawing and designing are identical in *ductus* or stroke. These forms of expression are unique to every person.

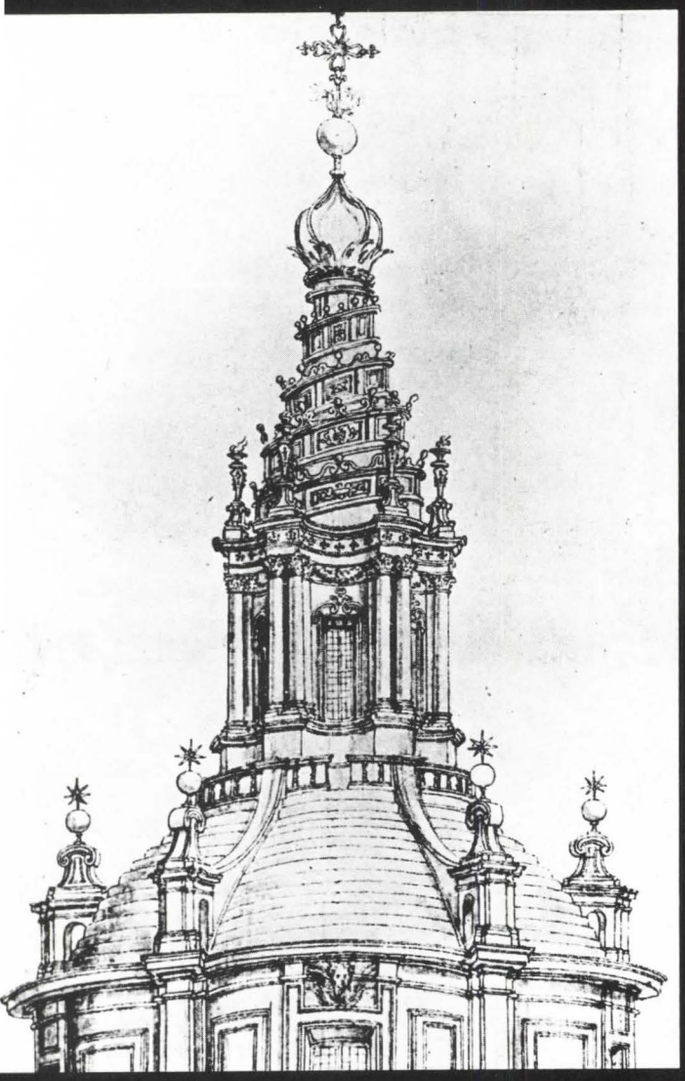
The massive evidence from the field of art will be more familiar to architects. Anyone who has taught art, especially to children and beginners, becomes aware that they almost always draw only faces and figures of their own physical type. Thus, boys draw males and masculine-looking females, and girls draw females and feminine-looking males. Even mature artists are often unable to go beyond their own physical type. Thus some portraits by noted artists can be mistaken for self-portraits because they look more like the painter than the sitter. (A portrait of

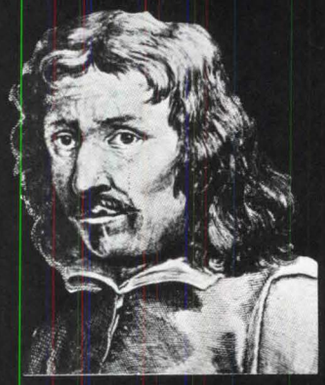
Mr. Maass is an information officer with the city of Philadelphia, and author of *The Gingerbread Age, The Victorian Home in America* and *The Glorious Enterprise.* Years ago, he reports, a graphologist who saw only his handwriting described him accurately as "slim, pale, with a somewhat fixed stare."



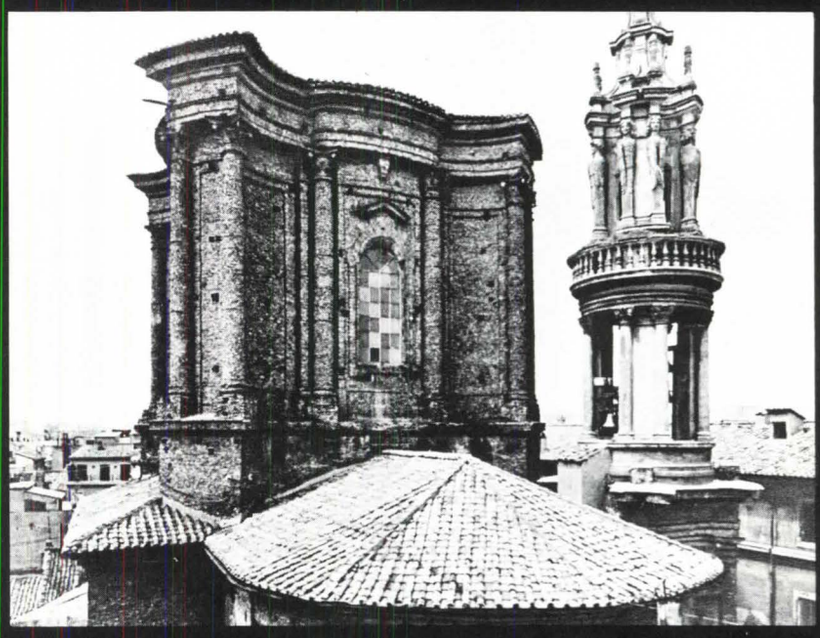
'The highly stylized persona of Le Corbusier' recalled both his buildings and the autos and other objects he admired.



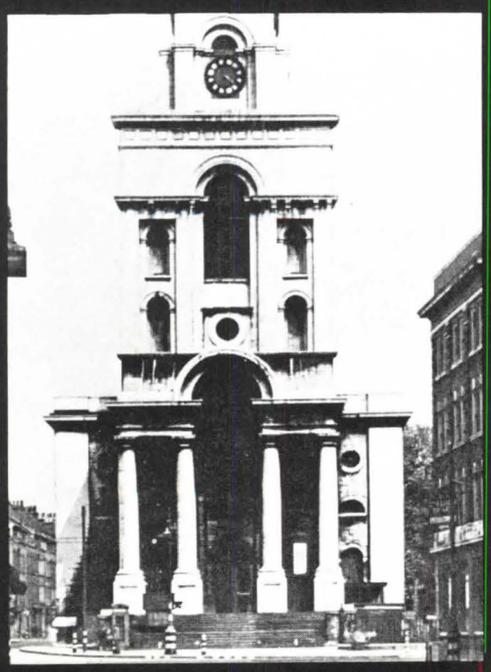


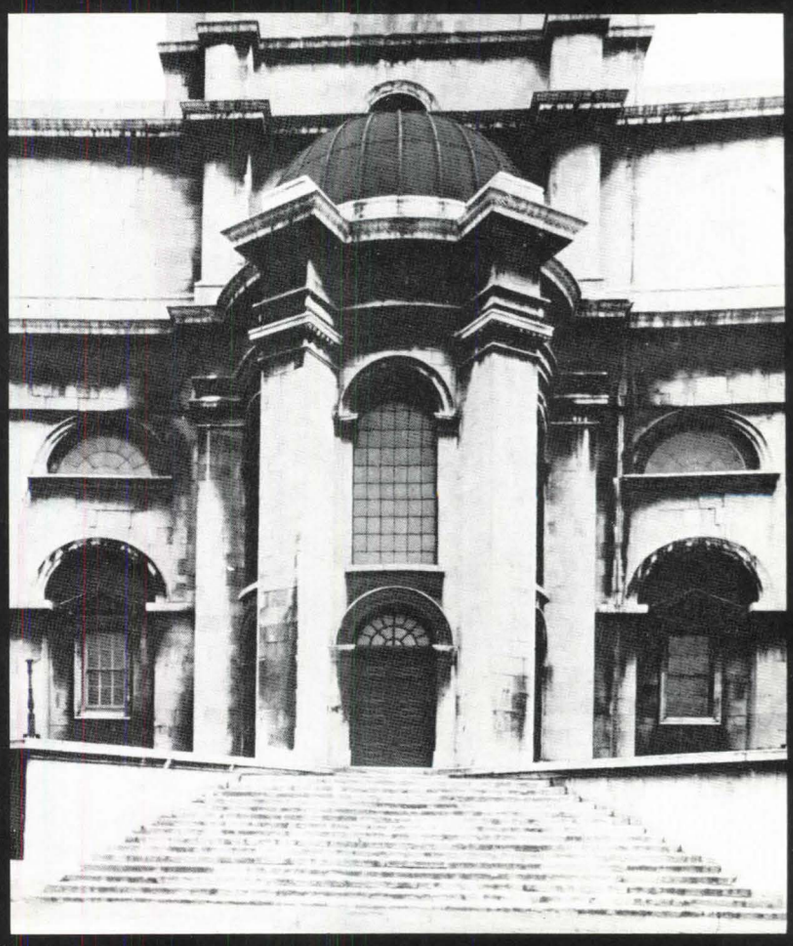


Francesco Borromini (1599-1667). The tortured expression of Borromini's only portrait fits the known facts about his tragic personality. When a line is drawn through both eyes and another line along the mouth, it becomes evident that they are not parallel. The face is deformed and twisted. This distortion is reflected in Borromini's distinctive asymmetrical and spiraling structures; these were designed at a time when architectural asymmetry was very rare and considered bizarre.



Nicholas Hawksmoor (1666-1735). His portrait bust shows two extremely conspicuous and odd features: a mouth arching downward and grotesquely bulging eyes. Boldly framed arches and prominent bull's eye windows appear on dozens of Hawksmoor's buildings. He also designed a number of domed buildings, reminiscent of his own skull.



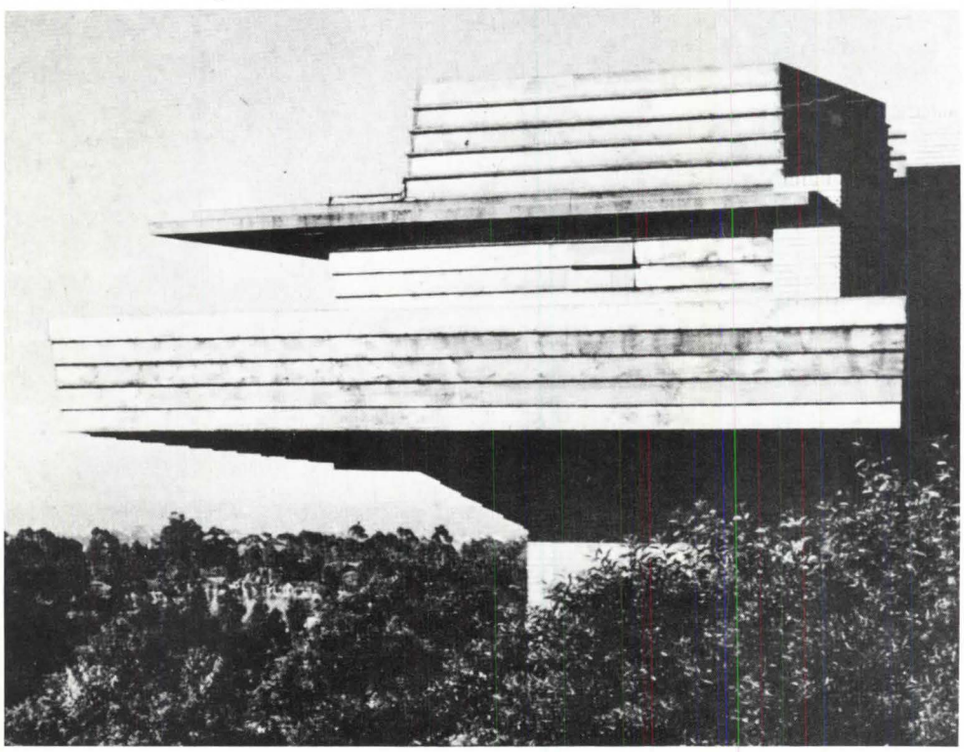


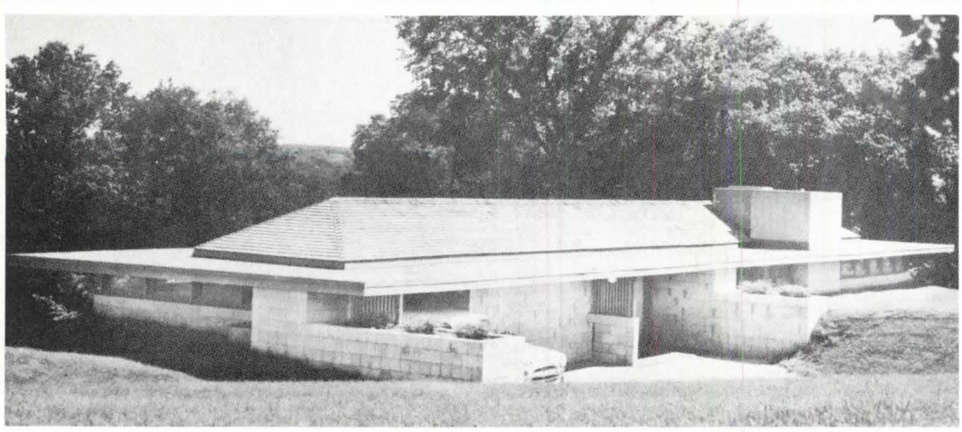
Bernini by Velazquez was long taken for a self-portrait of the artist.)

Johannes Itten, one of the first masters at the Bauhaus, demonstrated that even abstract designs often look like the face of the designer. He wrote: "I had a talented student of a most characteristic type. She was delicate, small, shy and soft-spoken. Her eyes were like moonstones, and her pale skin was transparent. She wore her hair loose, and while she worked it sometimes fell over her face like a veil. Her drawings and watercolors were without lines, in gray tones as if veiled; they conformed exactly to the appearance of the artist." In *Design and Form* (1963) Itten published photographs of six Bauhaus students and their designs. The startling resemblances are convincing proof of his thesis.

Architecture also is frequently an unconscious self-portrait of the architect, as shown in the accompanying photographs of architects and their buildings. (In every case many more works of the architect display the same characteristics.) Many others could be cited as exemplars as well. Thus, the hard and pointed features of William Butterfield are repeated in the pointed arches and gables of his Victorian Gothic buildings; Hector Guimard with his stylish appearance and wavy hair resembles his curvaceous Art Nouveau designs; the face of Louis Kahn, scarred in childhood by fire, reappears in his favorite surfaces of rough brick and pitted concrete.

A close resemblance has also been noted between the architecture and costume of any given period. In the 1830s, Carlyle wrote in *Sartor Resartus* that in all of man's fashions "an Architectural Idea will be found lurking; his Body and the Cloth are the site and materials whereon and whereby his beautiful edifice, of a Person, is to be built." In 1938, Claude Bragdon described a Victorian neighborhood in Watertown, N.Y.: "There was a subtle correspondence between the houses and the people who lived in them: the towers, cupolas, bay-windows, and other features being the architectural correlatives of the stiff hats, mutton-chop whiskers, and Piccadilly weepers of the men, and the bustles, corsets, flower-bedecked bonnets, and lace-trimmed parasols of the women. Architecture is like that: However false it may appear, it is still truthful, revealing the nature of the consciousness which produced it."



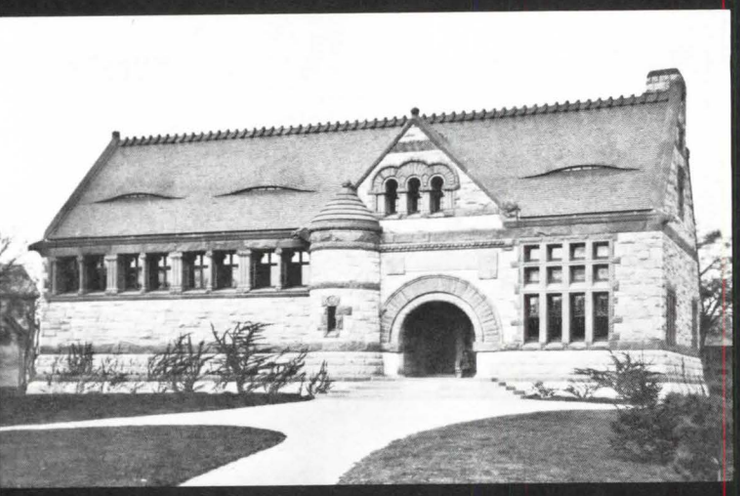


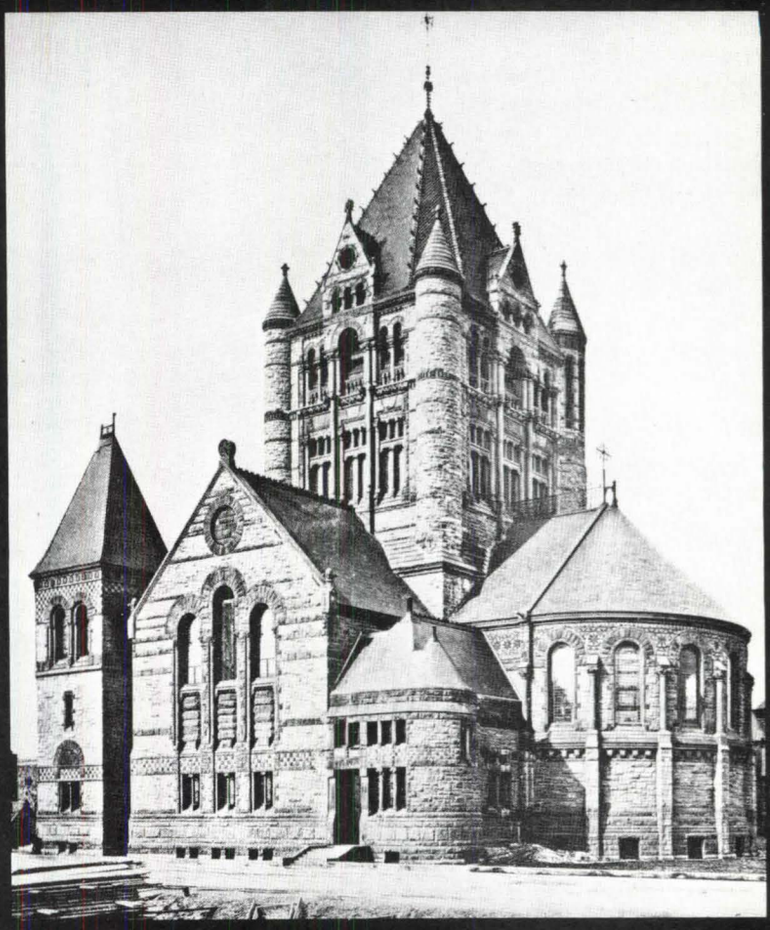
In the 1920s, Charles-Edouard Jeanneret assumed the highly stylized persona of Le Corbusier with black-rimmed glasses, starched wing collar, black bow tie and black suit. These austere items recalled the trim machinery, instrument panels, automobiles and airplanes he admired and illustrated in his book *Towards a New Architecture*. The same forms also appeared in his spare architecture of those years. In the same way, the large beret worn by Bernard Maybeck and the curious flat hat of Frank Lloyd Wright (left) were surely counterparts of their characteristic roofs and eaves. Wright also wrote in his autobiography: "It has been said that were I three inches taller than 5′8½″ all my houses would have been quite different in proportion. Probably."

With so many hints, it is surprising that so little has been published about this direct and specific relationship in the appearance of architects and their buildings. I know of only a single article, "Mens sana in corpore sano" by Welles Bosworth, FAIA, in *Architectural Record,* August 1911; it was modestly illustrated with photographs of two architects (Richardson and McKim), two sculptors and one painter. Bosworth concluded that the architect could not escape his own physical aspect in his work any more than "a camel could escape its shadow."

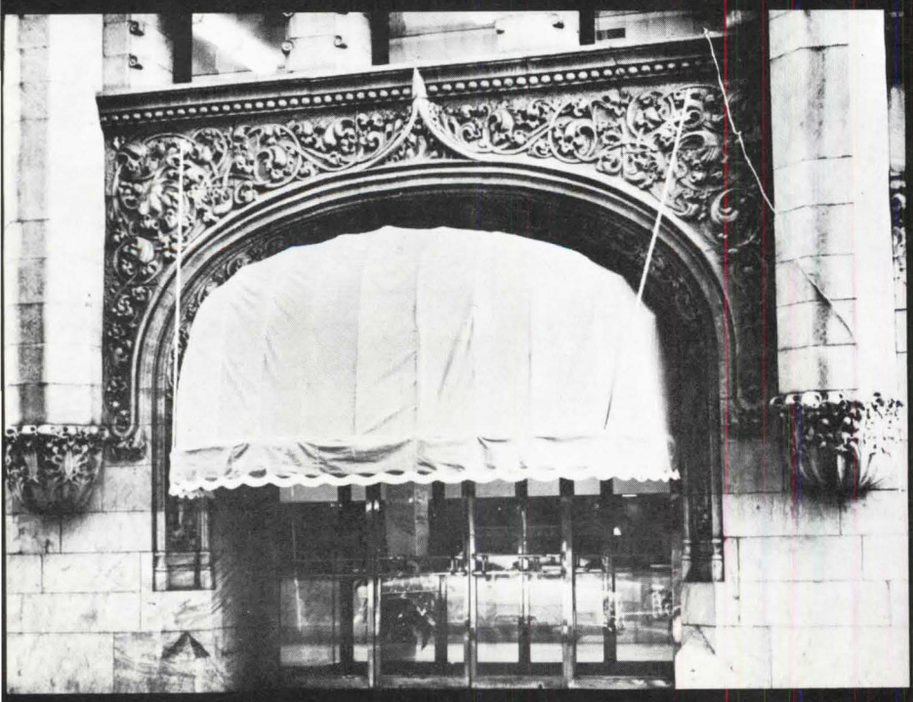
I do not assert that buildings *always* look like their architects. Such a claim would be absurd because there are many constraints in every building situation. The historians of architecture used to credit all architectural form to the inspired creativity of the architect in a vacuum. We no longer believe such simplistic fables. We know that the personality of the client is an all-important determinant. We know that climate, site, materials, the nature of society, economics, technology, tradition, religion and politics are among the many influences upon architecture. The physical aspect of the architect is still another factor that often influences architectural design. □

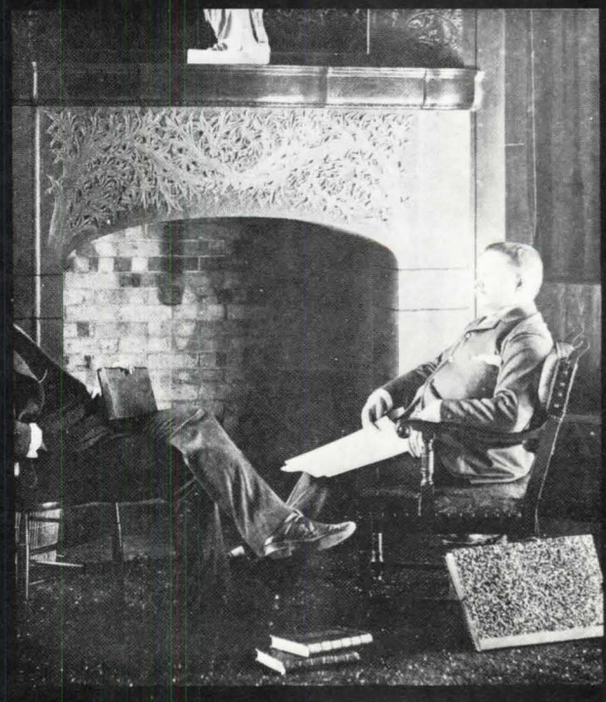
Henry Hobson Richardson (1838-1886) was an enormous man whose neck was broader than his face. All his buildings, regardless of size, are massive. The battered base of the building, resembling the architect's bull neck, is a hallmark of the Richardson style. Richardson had many imitators. The architect Claude Bragdon wrote about one of these: "James G. Cutler, at that time the leading architect in Rochester, even went so far as to grow a beard and get fat so as to look as much like Richardson as possible."

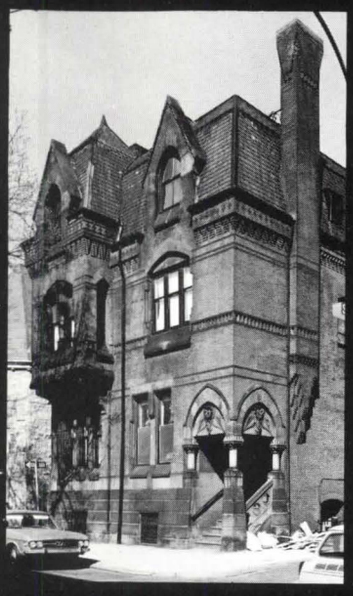




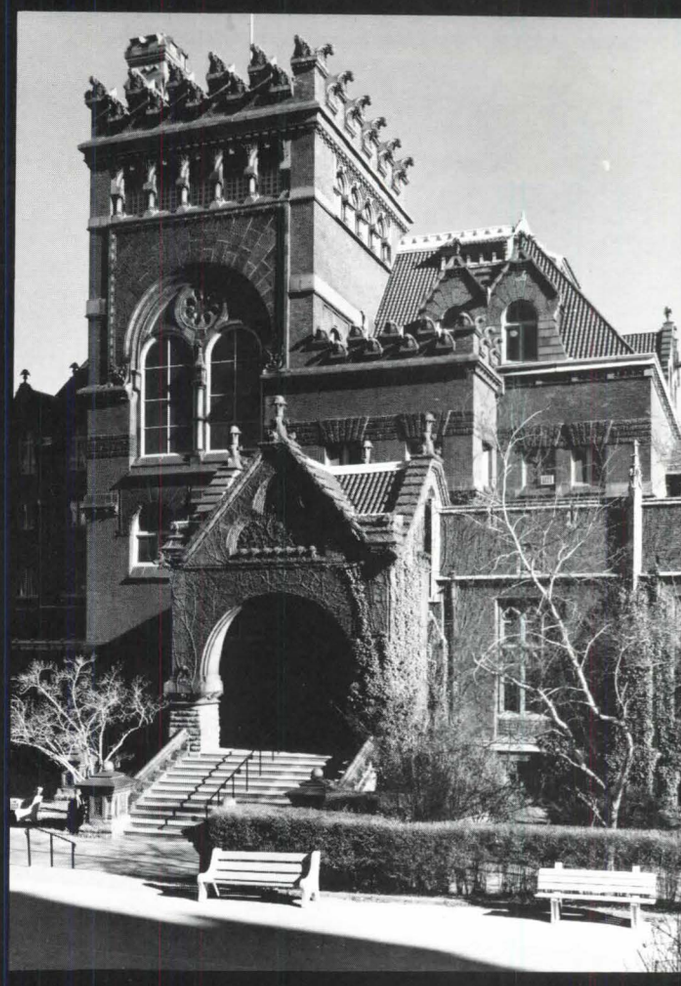
John Wellborn Root (1850-1891) was stocky and heavy. He had a curiously flat-topped head and wore his hair in bangs. Many of Root's ponderous structures feature a distinctive flattened arch that matches the top of his head; the arch is often decorated with a fringe of "organic" ornament.



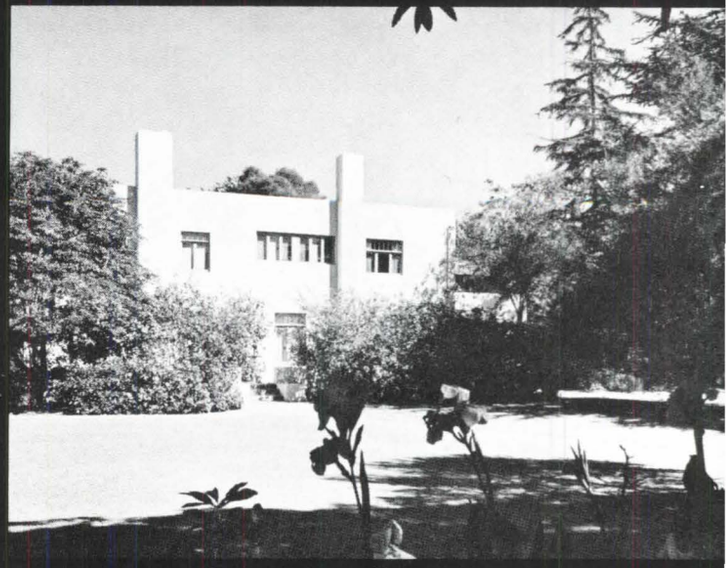


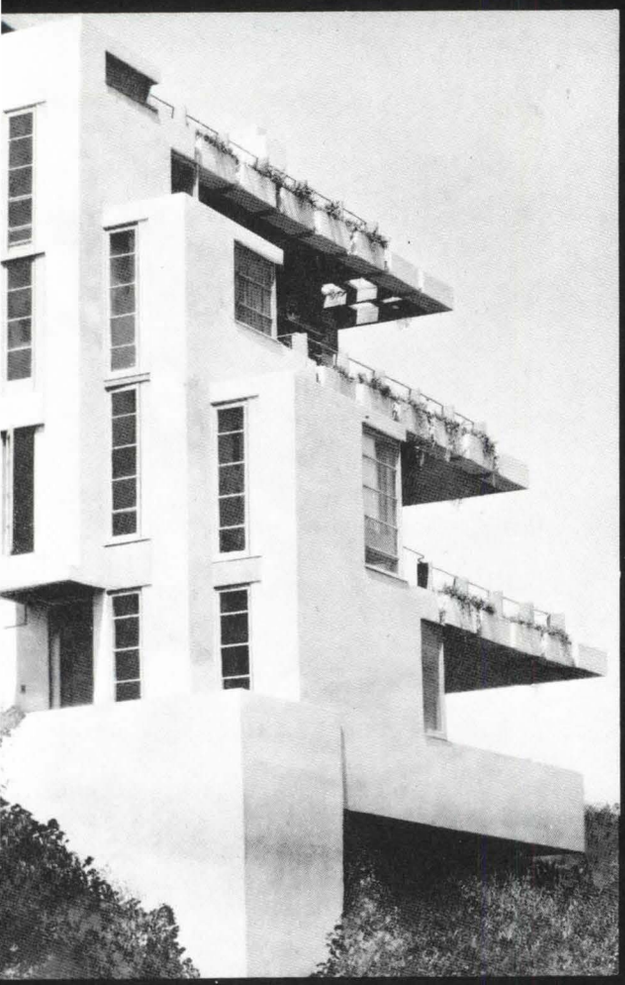


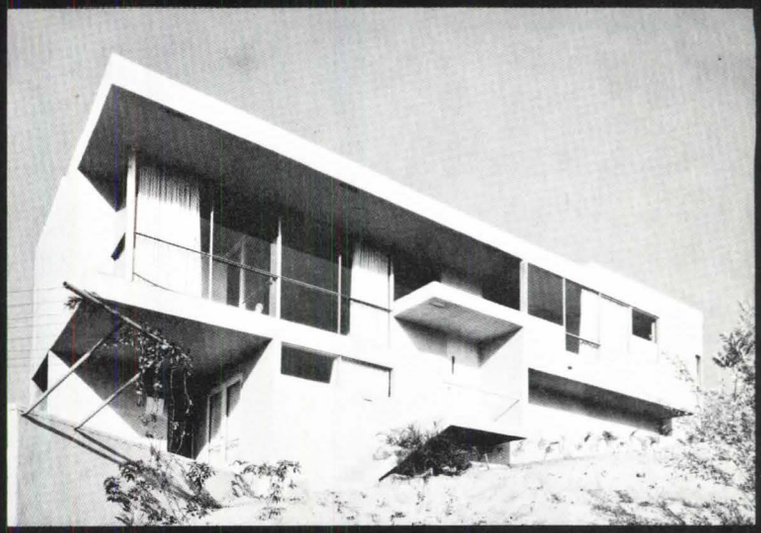
Frank Furness (1839-1912) was described as follows by Louis Sullivan: "He wore loud tweeds, and a scowl, and from his face descended fan-like a marvelous red beard, beautiful in tone, with each separate hair delicately crinkled from beginning to end. Moreover, his face was snarled and homely like an English bulldog's . . . he drew and swore at the same time." Furness's architecture is rugged with jutting projections. A great many of this redheaded architect's buildings are of red brick, often trimmed with red sandstone or red terra cotta, "beautiful in tone." Furness wore checked suits and shirts; many of his buildings feature exterior or interior ornament of check or diaper pattern.



Irving Gill (1870-1936) had clear, calm features, light skin and dark hair. All his buildings are clean, simple, geometric shapes, usually with white walls among dark foliage.







R. M. Schindler (1887-1953) liked to turn his sharply cut profile to the camera. It corresponds to the characteristic acute angles and triangular shapes in his hillside houses and furniture.

Philip Johnson (1906-) has a clean-cut face with piercing dark eyes. It is reflected in his equally clean-cut architecture which is frequently punctuated by inset spotlights.

Thoughts on Durability: Architecture As an Affirmation of Confidence

One factor in the choice of architecture as a profession must surely be a willingness to commit oneself in stone. By Rudolph Arnheim

Entities existing in the physical world and those that live only in the minds of human beings both have durability. But the two obey quite different rules, and the destiny of objects made of resistant matter varies from that of their counterparts in memory. Mies van der Rohe's Barcelona pavilion vanished as a material object a few years after it was built, but photographs of the building persist unchanged as long as paper will last. By contrast, the mental image of the Barcelona pavilion survives in thousands of minds, more or less completely, more or less accurately, in the twilight of many different contexts. It is an image that will remain in memory as long as it has any part to play in someone's way of dealing with his world. It is this curious relationship between how things persist in their actual physical form and in the mind that I propose to look at here.

The destruction of buildings profoundly shatters our sense of safety. For a long time I was naively convinced of the immortality of buildings—a conviction derived from their visual and tactile permanence. Architecture was for me a part of the stable world, that immutable setting in which we human beings perform our entrances and exits. Thus, during World War II air raids in London, I was shocked to see buildings, intact the day before, torn open, their living rooms, bathrooms and broken walls exposed obscenely, like the intestinal hollows in a side of beef. Even so, the sense of the mortality of architecture has never quite taken hold of my mind. A building still looks to me like something neither made by man nor liable to destruction.

We tend to take it for granted that buildings are solidly constructed so that they may last for a long time. But permanence is not likely to be the most elementary consideration. Any concern with the future or the past is less immediate than a concern with the present. Firmness and solidity are, first of all, a property of the present state of things and serve as the perceptual equivalent of what has value. If I make something of durable material, I express my conviction that the thing is good, often without the rationalization, and therefore I want it to last.

Different materials have differing psychological connotations. There is something tentative about writing with a pencil and something definitive about writing in ink. To draw on paper or to paint on canvas feels like a lesser commitment than to carve in stone, and I suspect that this difference is one of the factors that determines an artist's choice of medium. We know very little about what makes a person choose architecture as a profession. But one of the motives must surely be a willingness, and indeed eagerness, to commit oneself in stone.

This feeling must be particularly strong when the architect does physical labor in the construction of his building and thereby experiences something of the same intimate relationship with his material that allies the sculptor with his stone, wood, steel or clay. The relationship becomes more remote when architecture is produced on paper. The fact that so many projects are conceived and worked out on the drawing board without ever being accepted by a client and actually executed must cast a sense of nonreality over those drawings, as though the bold edifices they project consist of the stuff dreams are made of. Under such conditions it is natural to take more chances, to pay less attention to the technological problems of construction and to worry less about the usefulness of the building for its inhabitants. Those paper phantoms liberate the designer's imagination, but they also carry the risk of making architecture a noncommittal play with shapes. They give the designer a power that is cheaply acquired because it does not entail hoisting stones, casting slabs and facing the client.

The drawing board architect enjoys the best of both worlds. He is absolved of the responsibility which the graphic artist or painter bears for what he puts on paper. After all, an architectural drawing claims little value as a picture; it merely points to something which it is hoped will be produced in another medium. At the same time, the architectural designer can defer, perhaps forever, the responsibility for what is to be constructed.

Maintaining this commitment in the face of planned obsolescence and rampant mobility.

I have suggested that the material solidity of a building is only indirectly a provision for the future; that it is first of all an affirmation of the builder's confidence in the validity of his work. If this is so, then the present call for disposable architecture must also be more than the wish not to burden the future with structures that will no longer be useful. It must express a lack of confidence in what architects have to offer today.

To what extent such distrust is justified is hard to say. I see no reason to assume that the biological reservoir of creativity dries up at certain stages of history, although there are those who believe that the sap is running low in our Western world. Instead, it seems to me that children are born now, as they always have been, richly endowed with originality and imagination, that our students still sparkle, and that an occasional genius testifies to the potential health of the species. What holds us back is probably culturally determined.

The importance placed on an intuitive sense of form has been in decline ever since the Renaissance began to replace it with a reliance on measurement and numerical calculation, on the tools of modern technology and science. More important, the visible form of man-made things is no longer expected to transmit fundamental ideas of the human experience. This ailment was diagnosed in 1831 by Victor Hugo in a curious chapter of his novel *Notre Dame de Paris,* which describes events of the 15th cen-

Dr. Arnheim, professor emeritus of the psychology of art, Harvard University, is now a visiting professor at the University of Michigan in Ann Arbor. His writings include *Art and Visual Perception, Visual Thinking* and *Entropy and Art.* His book *The Dynamics of Architectural Form,* dealing with visual aspects of architecture, is due in the fall from the University of California Press. This article derives from the fourth Raoul Wallenberg lecture at the University of Michigan last October.

tury. Entitled "Ceci tuera cela" ("This will kill that"), the chapter culminates in an episode in which the archdeacon of Notre Dame sits in his study, having just received from Nürnberg one of the first printed books. Looking up through the window at his Gothic church, he points to the book and says to a friend: "This will kill that!" "During the first 6,000 years of the world," writes Hugo, "from the most immemorial pagoda of Hindustan to the cathedral of Cologne, architecture has been the great handwriting of mankind," giving visible form to all its important ideas. But now the book will kill the building.

However, language too relies on images, mental images, to express ideas which presuppose the ability to see meaning expressed in visual form; it requires also that the basic forces of human existence be awake in the person who is doing the looking. Without a live awareness of human aspirations, of the striving for perfection, of the notions of struggle and harmony and other such guiding ideas, a person's mind may be able to perceive the expressive qualities of shapes but be blind to their deeper symbolism.

Quite possibly some of our architects, especially young ones, sense half-consciously such a deficiency and therefore hesitate to commit their inventions to the solidity of stone. For it is precisely those basic ideas on the nature of man and his relations to his shelter and to his monuments that give a building a profound validity and therefore the right to be strong and solid. Perhaps then the call for planned obsolescence testifies to a thoughtful modesty. But there is also a risky defeatism in the willingness to reduce the aspirations of architecture. When buildings are limited to serving practical convenience and are merely temporary attractions, the architect and the community for which he works suffer a spiritual loss.

A community cannot remain in good mental health unless its citizens are made alive to those basic values of human existence. And here, it seems to me, architecture bears a special responsibility. For not all man-made things and activities possess the same power over essentials. There is a difference, for example, between a physician mending a broken leg or dissuading someone from committing suicide. Similarly there is a difference between designing an electrical toothbrush and designing a building. The building provides shelter and a place for people to do their work and their living. It thereby reaches all the way down to the essential concerns of man.

This responsibility concerns all architecture, not just churches, courthouses and town halls, which may be said to specialize in higher values. The dignity and significance which we bestow on religion, justice and government belongs equally to hospitals, in which lives are saved and health is restored, or to factories, in which men and women work together for the enrichment of everybody's life. In fact, all buildings, including Nikolaus Pevsner's proverbial bicycle shed—and more generally all man-made things—share the task of reflecting the nature and demands of human existence. They fulfill this task by means of the form they give to their functions; and since their functions reach all the way from the highest spiritual needs to the simple practical requirements of a box or tool, the level of their philosophical message must vary correspondingly.

The hesitation on the part of architects to make lasting statements derives from still another aspect of our present civilization. The taste of recent generations, especially in North America, favors the dynamic over the static, the mobile over the immobile. In our country, the dissolution of the social caste system, the easy change of residence and the constant modifications of the environment make for mobility. In arts throughout the world, the active media of music, film, television and performance of any kind are preferred to painting, sculpture and perhaps architecture, which represent a state of immobile being. This may explain a reluctance to build with solid materials.

But we must not delude ourselves into believing that merely using disposable equipment and materials will give us entrance to the dynamic conception of life proclaimed by the artistic media of performance. A good work of music or cinema, dance or theater persists in time just as a work of sculpture or architecture endures in space. Such inherent qualities bring with them the usual obligation to search for the essential features of the human condition and to present them in valid form.

Architecture, by its very nature, cannot do much moving of its own. Frank Lloyd Wright's Falling Water remains an exploit; rotating penthouses create more motion sickness than exaltation and movable partitions rarely touch the core of a building. If architecture wants to do justice to the modern taste for mobility, it can do so, for example, by rising to the challenge of the mobile home, whose particular requirements, structural as well as esthetic, have so far been neglected.

Presumably much architecture will remain rooted in the

ground. I find it hard to believe that balloons and tents will exert a major influence on the architecture of the future. But we do notice that architects are becoming more sensitive to the mobile society they serve, namely the human bodies and the goods that come and go in buildings. Those needs have been impressed upon the modern builder by the requirements of high speed transportation, especially in the design of freeways and metropolitan thoroughfares. Traditional architecture may be said to have acted on the flow of life mostly as a regulating counterforce. Some modern architects tend to conceive of buildings more nearly as stabilized tracks of movement, resembling the beds carved by water or the channels dug by animals.

It is true, however, that fundamentally any solid object at all is an obstacle to the constant flow of events. By its lack of plasticity any object is, as it were, a splint on the legs of Father Time. Buildings are a prime example of this stubborn opposition to change. It suffices to remember how buildings help the conservative-minded to retain some of the values of the past, while the more radical advocates of progress resent them as obstacles to the creation of new models for a new life. A favorite occupation of revolutionaries is the destruction of buildings.

Let me use a special example. In the 19th century a biological notion prevailed that evil, crime, deficiency and disease were transmitted through generations, and these increasingly weighed down on descendants like a curse. In literature, a building or a substantial piece of furniture was made to act as the tangible symbol of this ever present liability. Emile Zola expressed this in his novel *Le docteur Pascal.* A physician addicted to the study of heredity collects all available facts on his ancestors, and these documents of degeneracy, murder, drunkenness and aberration lie as a persistent threat to the family honor in a locked oak cupboard of forbidding size.

The character of the great buildings survives radical differences in the very ways that they are seen in different times.

More explicitly, in Nathaniel Hawthorne's *House of the Seven Gables,* the proud residence of the evil ancestor survives as "a miserable old dungeon," its grime and sordidness being "the crystallization on its walls of the human breath that has been drawn and exhaled here in discontent and anguish."

In a broader and less dramatic sense, this curious 19th century variation of the doctrine of original sin speaks of the past as a handicap—lying, writes Hawthorne, "upon the present like a giant's dead body"—and of the rooted mansions of architecture as its instruments. In one of the most moving chapters of 19th century literature, two aged escapees from the House of the Seven Gables experience the exhilaration of a first trip on the railway, that modern invention whose "increasing facilities of locomotion," says old Clifford, "are destined to bring us round again to the nomadic state."

In Goethe's "To the United States," the German poet wrote: "America, you are better off than our old continent. You have no dilapidated castles, no petrifications, and your mind, alive in time, is not disturbed by needless recollection and fruitless strife." This was in the 1820s. We would hardly have needed the occasion of the bicentennial of the American revolution to remind us that by now Americans, as diligently as Europeans, visit the historical sites, look at the old furniture, the chandeliers and the startlingly short beds of their progenitors. As they climb the uncomfortable steps of the winding stairs, they imbue themselves briefly with the awesome spirit of the past and derive from it some pride and comfort.

I cannot attempt here to discuss the complex interaction—positive and negative—between buildings fitted to the needs of a past generation and a later world that admires, tolerates or destroys them. It is a subject to which Kevin Lynch devoted his recent book *What Time Is This Place?* But I will refer at least briefly to some of the psychological conditions on which the changing relationships between buildings and their users depend. In the beginning of this article I mentioned the transformations that our mental images undergo in the course of time. I also said that such change, sublimation or distortion occurs more freely when the subject survives only in memory. The continued presence of buildings should severely limit this process. But actually the history of architecture indicates that the same buildings have been viewed in remarkably different ways at different times by different people. We are dealing here not only with a difference in taste or judgment but with a much more radical phenomenon. Different observers actually *see* a different building under different conditions. This seems remarkable since the images recorded on the retinae of the observers' eyes remain the same. The questions arise: What dimensions of variation are available in a perceptual pattern that seems to be fixed in its minutest details? How can the same thing actually be seen as a different one?

Two aspects of the problem are pertinent here. First, the human mind perceives selectively. This is true not only in the simple sense of partial attention, by which certain features of an object are noticed while others remain unseen. More interestingly, there occurs a restructuring of the perceptual hierarchy: Predominant features can be subordinated to others that are seen as secondary by someone else or at other times. The total pattern of the object's appearance can change under the pressure of different needs. Thus, some leading spokesmen of the French architects of the 17th and 18th centuries were not deterred by the rejection of the Gothic style prescribed by the classical canon. Their displeasure with what they saw as the heaviness and clumsiness of the baroque churches, such as St. Sulpice in Paris, made them revise their image of the Gothic. Marc-Antoine Laugier, walking into Notre Dame, found himself impressed by the grand effect of the whole, by the size, simplicity and unobstructed view of the nave and the favorable proportions. The "mass of grotesque ornaments," so objectionable to the classical taste, was willingly consigned to the background. Or, to cite a more recent example, the ornaments of the Art Nouveau style had been seen for decades as tasteless excrescences of structures that should have been content with the nude geometry of the basic shapes required by practical function. But recently, under the influence of a new taste for expressionist complexity, the view of those fancy doorways, subway entrances and chairs has changed. What had been seen as an understructure encrusted with fancy frills gave way to an image in which the surface texture of the design mattered most. This surface texture was read now as an important statement on a modern relation between the forms of nature and abstract stylization.

A further degree of freedom is offered to our view of objects by the fact that all perceptual dimensions depend on the spatial and temporal context in which they appear. The same object can look tall or small, wild or tame, gloomy or benign depending on what it is compared with. Thus, the sober cubes of the so-called International Style of architecture, which soothed people's overtaxed eyes in the early decades of our century, may offend us now by their unimaginative blandness.

All such differences of appearance, however, matter only within a short range of human orientation. Especially for the great buildings, these differences are only variations on a persistent theme, which is the lasting character of the object. Whatever the changing perspectives and the correspondingly changing evaluations, the Parthenon remains the Parthenon and Chartres remains Chartres, each unalterable not only in its distinct personality but also in its inherent excellence. The passing judgments of the day are but oscillations of light and shadow, casting their momentary effects on what continues to stand there, beautiful and heroic, built in stone and steel. □

The Frustrating Fate of Urban Design in Hawaii

It has been consistently ignored by the island state's planners and politicians. By Thomas H. Creighton, FAIA

Architects in America were still learning about urban design in 1965 when Paul Spreiregen, FAIA, wrote and illustrated his fine book on the subject, although Camillo Sitte's 19th century study had been reprinted some years earlier and, as Spreiregen noted, AIA itself had had an urban design committee for 40 years. During the early 1970s, the concept became popular, for several reasons, in circles wider than the architectural profession and to a limited degree came into political favor.

For members of the general public concerned with improvement of their cities it seemed to provide a goal more tangible than the tired term "beautification," without requiring too deep an involvement in the intricacies of the planning process. For politicians it furnished a platform with high-sounding principles which should appeal to any constituent. Architects, of course, were happy to see this development, because it seemed to add a dimension to city planning which gave them a chance to utilize their particular skill—design—in the increasingly complicated problems of urbanization.

In mainland America, urban design became a requisite element in an increasing number of municipal general plans in the '70s, and word of this trend traveled to the mid-Pacific state of Hawaii through reports made by several local writers (including myself, doing a weekly newspaper column) and from visits by mainland architect-planners who spoke on the subject.

As in other places, urban design became a sort of stylish idea in Hawaii. Understanding vaguely that it promised more attractive city spaces, the state legislature in 1973 adopted a resolution telling the four island counties (Oahu, Hawaii, Kauai, Maui) that they must include urban design elements in their general plans. Realizing more clearly that a great deal of work was involved and believing that other tasks had higher priorities, the county planning directors for some time quietly ignored the order.

A Honolulu newspaper story in 1974 noted that urban design had become an "in" concept, even though few people seemed to know what the phrase meant. The writer also described conflicts that were developing between local architects and city planners over the subject. The architects insisted that urban design was an essential part of the city-planning process.

Conversely, Honolulu's planning department, like many others, felt that design considerations were irrelevant to a policy-oriented general-planning procedure. There seemed to be no understanding of *design* (whether or not identified as *urban*) as a means for giving structure to a plan (any kind of plan). When, in one of my columns, I chided the planning department for sloughing off the urban design element in its general plan revision program, then underway, a functionary with the title of deputy planning officer replied in inquisitorial rhetoric: "Where in the urban design is the plan for how housing will be financed? Where in the urban design is the means by which the community will receive police and fire protection?" To the argument that plans and designs should interact and should be considered together (certainly plans for housing and municipal services), the planning official replied in a letter to the editor, "Absolute nonsense." Whatever it might be, he insisted with reverse logic, urban design "is not the glue that holds the plan together."

Honolulu has had urban design principle urged upon it several times before, with similar negative reactions. When the city was first thinking in formal city planning terms, tempted by advances being made on the American mainland, its park board (not its planning department) invited Lewis Mumford to visit and give advice. He prepared a report in 1938 which, among other perceptive and literate comments, said that "Honolulu is a little like a beautiful woman, so well assured of her natural gifts that she is not always careful of her toilet; she relies upon her splendid face and body to distract attention from her disheveled hair, her dirty fingernails or her torn skirt."

Mumford concluded that no other city he knew of "would proportionately yield such high returns" to a well-designed city plan. There was none produced, however. In the 1960s, a task force from the national AIA office, sponsored by the Ford Foundation, studied Honolulu's design-plan situation and reported back in terms similar to Mumford's that because of Hawaii's "frontier status" it could "raise the kinds of problems and create prototypical opportunities for furthering the state of the art" of urban design "that we are unlikely to find anywhere else."

With no advance in "the state of the art" evident by 1968, the State Foundation on Culture and the Arts, directed by Alfred Preis, FAIA, made a heroic effort that year to demonstrate the broad need for urban design in Hawaii and illustrate its potential value for all of the islands. A five-part research, study and design project called the Environmental and Urban Design Proposals was organized, largely financed by the National Foundation on the Arts, and carried through by principals of five respected local firms. Two of those commissioned were planners, two were architects and one was a landscape architect; all, however, were broadly based in the design disciplines. In the programs the meaning of urban design was widened to include design problems faced in open country where urban expansion impends, and the term environmental design was added to further enlarge the definition.

There has been no dearth of studies over the years, only a dearth of accomplishments.

Few exercises in urban design have ever gotten off to a more promising start. The four island-county planning directors sat on an advisory committee, since it was hoped that their counties' official plans might benefit from the studies in which they were thus participating. In addition, a number of consultant-critics were appointed (Robert Geddes, FAIA, Garrett Eckbo and Allan Temko from the mainland and several others, including myself, chosen locally). Geddes noted that the assignments illustrated an "extreme diversity of scales," and indeed they did. They included a design for Honolulu's waterfront; study of the design for and impact of a highway along the island of Hawaii's south coast; redesign of the drab city of Hilo (proposal: a city of flowers); sugges-

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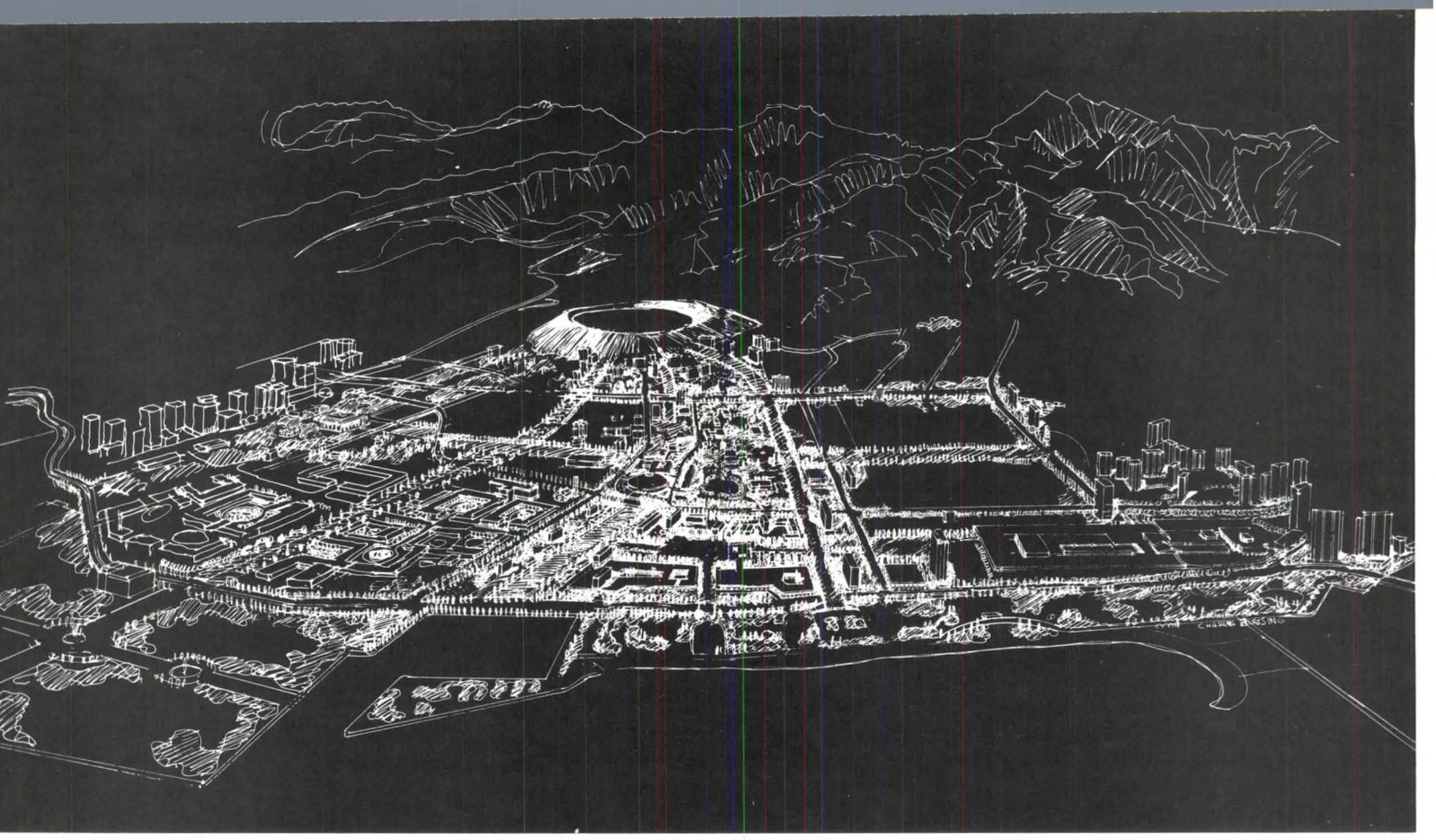


Above, Charles Blessing's depiction of the 1974 R/UDAT team's concept of the Kakaako district as a new town in town. Three years later Kakaako remains neglected and decayed (photos opposite).

tions for locating and designing a civic center in Wailuku, Maui's capital town; design analysis of the future of the historic city of Lahaina; proposals for development of a stretch of coast from a quiet old town called Makena on into a wilderness area (recommendation: none); creation of a design-plan for a developing beach cove at Poipu, near Hawaii's first plantation town of Koloa, on Kauai.

Nine years after completion of the studies, almost no benefit has accrued from them. The planning directors went home and forgot the project. Honolulu's waterfront, as a visiting design team recently commented, is still an "unattractive, ragged shoreline," with no coordination among its parts. The big island's Kona-coast highway is a part urban, part rural, always typical highway engineer's freeway. Hilo is still searching for a reason for being, and Wailuku's civic center is ordinary public-works architecture. Lahaina has succumbed to the tourist-boutique syndrome. Heedless development threatens the Makena coast and envelopes Poipu Beach.

There have been many reasons assumed for the lack of influence of the EUDP studies, but as in all such failed efforts, anywhere, the trouble has simply been the inability of urban design to control urban development when urban administration is disinterested.

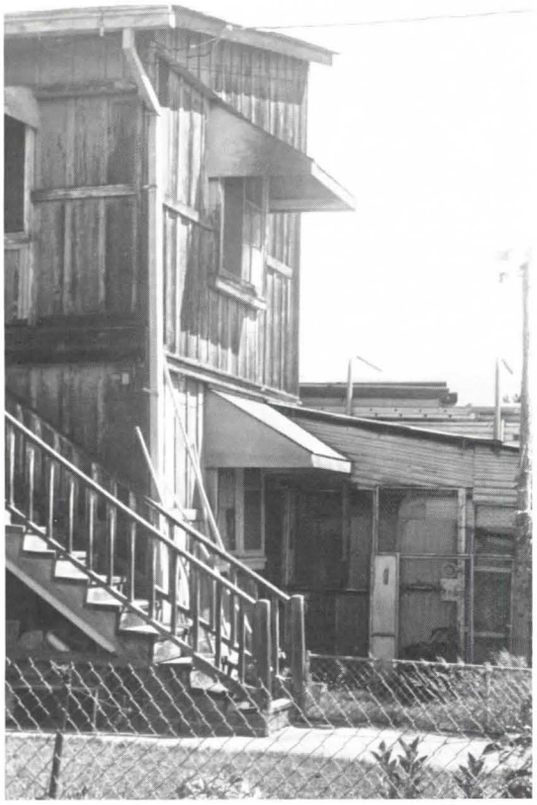
The most recent example of the resistance to urban design—of the fear of commitment to designed urban spaces, really—was the experience of the AIA R/UDAT team which visited Honolulu in 1974. (*See* July 1974, p. 47.) The area chosen for study was a miserably underutilized part of the central city, for which no official plan had ever been developed. There seemed to be local enthusiasm for the R/UDAT enterprise, ably arranged by the Hawaii AIA chapter, and well publicized. The group that was brought together and taken to Honolulu with financial and even moral support, at first, from landowners, business firms, concerned citizens and civic associations, encouragement from the state administration and at least no opposition from the city, was admirable: planners Carl Feiss, FAIA, and Charles Blessing, FAIA; architects Rai Okamoto, FAIA, Robert Sturgis, AIA, and David Meeker, FAIA (also a HUD official), development economist David Peterson and Edward Logue, Hon. AIA, then head of the New York State Urban Development Corporation.

The area to be studied is called

First result of a 1974 R/UDAT was 'political controversy rather than urban improvement.'

Kakaako, 1,200 acres of land in the heart of Honolulu's core, between downtown and Waikiki, stretching from the sea to the hills, crossed by all the east-west roads running along the urban corridor. A few families remain there from an earlier disintegrated neighborhood, but Kakaako in the 1970s is mainly a jumble of small businesses and marginal industries scattered along narrow, rutted streets and alleys, clogged with vehicles but somehow finding room, here and there, for a fine tree or a bright spot of garden that gives color and character to the surroundings. The state-city capitol district is almost next door on one side and the highly successful Ala Moana shopping center is a neighbor on the other. Remarkably, although the city is wondering where and how to expand and is considering further growth into fresh farmlands, it has persisted in ignoring this valuable, poorly used territory in its own heart.

After consultation and study, the team members suggested a renewal scheme that could make Kakaako an attractively functioning new community in town while retaining much of its old-time character. Since neither city nor state had developed any plans or even policies for the area, save to leave it as it is, the R/UDAT team had to devise its own program—an upside-down process that couldn't be avoided. The assumption made was a redevelopment goal of high-density but mainly low-rise residential uses integrated with certain light industries and service businesses. The proposal was for the city to start careful, coordinated planning and sensitive design of a neighborhood of some 20,000 homes for all income levels, where some new and some existing businesses would furnish local work for local people, where large amounts of open space and an expanded waterfront park would be provided. This could be urban design at its best, with the plan structured to allow the saving of view planes and vistas through the redeveloped area, higher buildings kept on the periphery and the waterfront used for recreation.



The experts on the team knew the difficulties that would lie in the way of implementing such a designed plan. There are three principal landowners in the area, each with its own long-range development plan and, for the rest, land tenures are a patchwork of sites confusingly leased for varying terms, with property absurdly overpriced. To cut through this tangled urban-land knot, the R/UDAT team proposed formation of a central Honolulu urban development corporation with power to acquire, finance and develop. (Interestingly, despite Logue's later troubles with New York's UDC, this is the only part of the proposal that has met public and private support.)

For some time there did not seem to be any visible gain from the team's efforts, although it was clear that attention had been called to Kakaako's problems and potentials. The immediate result was political controversy rather than urban improvement. The city, through its planning officials, expressed stiff-backed rejection of the new-community-in-town concept, poking all manner of fun in the press at the visiting "instant experts." The entire idea was "blue sky," said a member of the planning department. Sensibly if sanguinely, the local AIA chapter turned to the public for support and a Citizens Group for the Design of Central Honolulu was formed. Attempts were made to stimulate the cooperative interest of both small and large landowners, without much success; several started to go ahead with their own unrelated plans.

Then suddenly a number of public figures seemed to see Kakaako's possibilities as a sizable political plum. The governor had long been interested in the area (more than any other public official, he had supported R/UDAT's activities) and soon the state's planners came up with a 300-page urban design "demonstration study" of the district (with one alternative proposed very similar to the R/UDAT scheme), analyzing implementation possibilities (including one utilizing a development corporation, as R/UDAT had suggested). Then the state legislature decided that it should make a proposal for the area too, and in 1975 it passed the Kakaako Development Corporation Act, setting up such an entity as R/UDAT had advised, but as an arm of the state's housing authority, with little independent power and no fund-raising ability. It has done nothing to date.

In Honolulu, the city council has set itself up as 'designer' of the city's shape and form.

Finally, in 1976, the city's planning department reexamined its policy for Kakaako and issued still another study, suggesting that Oahu's increasing number of tourists, rather than its own residents, might be the best occupants of this in-city land. What would be a more reasonable spot for resort proliferation to spill over from crowded Waikiki, the planners asked, than Kakaako? The city council, always at odds with the city administration, then hired a planner to develop its own ideas for Kakaako. The legality of this action has been challenged in the courts.

All of this boiling up of interest has simmered down now, however, and Kakaako remains just as it was when the R/UDAT team arrived. Another attempt to demonstrate the value of designing the use of prime urban land has resulted only in stirring interest in its economic worth. That Kakaako will in time develop, now that its value has been so thoroughly explored, seems inevitable. Whether its development will be carefully conceived, planned and designed is not so sure.

In fact, urban design as architects perceive it does not seem to have much of a future in Hawaii—certainly not on Oahu. (On the island-county of Hawaii, under the attention of a wise planning director who is now being fired by *his* council, several well-considered town designs are being debated.) In 1975, Honolulu's city council, frustrated in Kakaako, Waikiki and several other spots, found its own substitute for integrated planning/designing in another notion borrowed and distorted from a mainland prototype, called *special design districts,* under its own jurisdiction. A bill was passed declaring Waikiki (long in need of design attention) such a district, and before long other neglected parts of the city were either being considered for this designation or were so tagged. The possibilities are endless; the council, having learned the benefits of urban design, can now itself "design" when and where and how it wants.

Let architects elsewhere take warning: Don't push too hard for urban design unless your community has a good grasp of its meaning. Otherwise, you may open the door for some pretty pernicious parodies of the concept. In Honolulu, the shape and form of the city can now be fixed by moves in a political game, in the name of design. There is no need any longer for a glue to bind the parts together. □

The Salvation of Times Square As a Challenge to Urban Design

Tawdry as it is, it remains the heart of the New York theater district and the city's most powerful symbol. By Martin Bloom, AIA

The intersection of Broadway with Seventh Avenue has created a space and a place so distinctive that, since the turn of the century, it has come to mean New York City to people around the world. New York, of course, has other symbols —the silhouetted skyline, the Statue of Liberty, the Brooklyn Bridge, the Empire State Building, the UN and, most recently, the Trade Center—but none has captured the popular imagination more than the heart of the theater district. In spite of its honky-tonk flavor, it retains its supremacy, perhaps because it embodies the drive, rhythm and brash overstatement of the 20th century spirit.

As an image of cultural aspiration, Times Square ranks with the Eiffel Tower. It is not, however, a distinctive building or a complex of distinctive buildings. Neither is it a feat of engineering: It is nothing more than a void that is spontaneously filled every time the population feels the need to rejoice. On great occasions—New Year's Eve, election night and the achievement of peace through military victory—Times Square becomes the ultimate village green: the gathering place of the multitudes.

Broadway is the Main Street par excellence. It began that way at the southernmost tip of Manhattan during the time of the earliest Dutch settlement. It has continued to dominate commercially ever since. Thrusting its way in a variety of angles, it has over the years, like an irresistible force of nature, defied all attempts to absorb and tame it within the methodical grid pattern imposed upon the further development of Manhattan in the early 19th century.

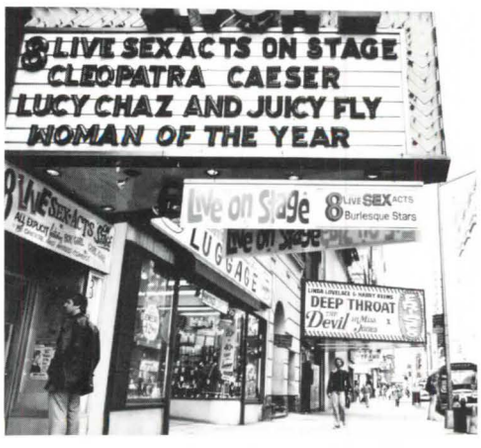
As the city developed northward, the theater district shifted up Broadway. Beginning at City Hall Park, it had traveled to Union Square by the 1870s, Madison Square by the 1880s and Herald Square by the 1890s. At the turn of the century, it had reached Longacre Square which became Times Square when the *New York Times* built its office tower there in 1904. Since then, the elongated juncture of Broadway and Seventh Avenue—from 43rd Street to 47th Street—has been called Times Square, though the *Times* has long since abandoned its tower for larger and more efficient office space to the west, and the northern portion of the square was renamed Duffy Square after World War I.

With the completion of the interborough subway, also in 1904, Times Square became the major hub for the city, and it was natural for the newest theaters to be concentrated there and on the side streets to the east and west of Broadway. Theater building at that time was considered a highly profitable enterprise and it took the stock market crash of 1929 to effectively end the activity just short of Central Park South. From 1929 until the 1960s when Lincoln Center was created on Broadway in the West 60s, no major legitimate theaters were built in Manhattan.

By the late 1920s, the Broadway theater district had reached its zenith and Times Square was internationally famous. The peak year was 1928, when 264 theatrical productions appeared—a record then and never equaled since. And it was the heyday of the spectacular electric

Mr. Bloom, whose special interests are theaters and theater districts, practices in New York City.

The Great White Way in its '40s splendor (left), some of today's realities (below) and the still-grand view (right) looking north from the former Times Tower.




SONY
Watson

The Times Tower wedge related genteelly to the French Renaissance Astor Hotel in the '20s (top). Today, the Times building has changed character and the Astor is gone, replaced by a highrise.

signs. Broadway had evolved into a gigantic billboard communicating the virtues of a seemingly endless variety of products through the medium of flashing lights, brilliant colors and competitive advertising slogans. As G. K. Chesterton, as early as 1921, had quipped: "What a glorious garden of wonder this would be, to anyone lucky enough to be unable to read."

These dazzling images were idealized, interpreted and made world-famous by the photographers and the painters of the time. John Marin conjured up a throbbing impression of Times Square in 1929 and Mondrian climaxed his career by painting the 1943 "Broadway Boogie-Woogie," capturing the syncopation as well as the visual brilliance which, by that time, were fast fading. And of course, Hollywood perpetuated the myth in cinematic fantasies that encircled the globe in the late 1940s and early 1950s.

It is no wonder then that, when a first-time visitor, primed with expectation and with the stylized image of Times Square in his mind's eye, encounters the area today, he is confused. Even by night and under optimum conditions, it is a disappointment. By daylight, deprived of its incandescence, it is a slum.

Everywhere there is evidence of blight. Even the newer office buildings seem touched by it. Pornography and prostitution have intruded into the unplanned fabric of the area. Sex-oriented book and poster shops, peep shows, transient hotels and marginal bars abound. There is a constant threat of crime, and sidewalks inadequate to the volume of pedestrian flow combine with severe traffic congestion to render the area unsafe. A lack of space for pedestrians merely to stand and observe the passing scene reduces the possibility of perceiving even those qualities of Times Square as a symbol of entertainment that still exist.

And yet, the cultural impact of the New York theater district is enormous. Even though many Broadway theaters are featuring plays that first found success in the regional theaters and abroad, it is New York which sets the standards. Unless a play or a performance can be successfully transplanted to New York, it is unable to garner the highest possible acclaim and make the greatest profits. Times Square, in spite of its physical squalor, remains the theatrical capital of the world.

Indeed, over the past few years, the Broadway theater has been enjoying grosses from ticket sales unmatched since the palmiest days of World War II. Great numbers of people seem to have developed a ravenous appetite for live theater, perhaps as a reaction to the stultifying effect of almost three decades of television and a cinema that, in recent years, seems to have alienated most sensibilities by indulging in a surfeit of fantasy and violence.

For whatever reason, the box offices and ticket agencies along Broadway have been unusually active and the local restaurants—Sardi's, Ma Bell's, Downey's, Frankie & Johnnie's, to mention a few—have been operating close to capacity both before and after theatrical performances. The garages and parking lots have been doing a brisk business and it is not uncommon to see charter buses bringing audiences en masse from outlying areas. And, of course, as anyone who attempts to hail a cab anywhere in the city at show time can testify, taxis are at an absolute premium.

Broadway is not only big business for Broadway; it also has its effect on the economy of the rest of the city. As a lure to convention business and tourism, the theater helps to fill hotels, restaurants and shops all over town. The theater also attracts out-of-town buyers who often come into town to transact business just for the sake of seeing the latest shows. The resulting employment and profit are considered adequate justification to preserve and promote the theatrical life of the city.

But Broadway as a theater district is imperiled. Although its appearance is tawdry and decaying, it exists on valuable land in a strategic location. Therefore,

Theaters in the new highrises 'are incapable of contributing to the texture of the street.'

whenever the economy permits, the older real estate is demolished. The venerable Astor Hotel, built just after the turn of the century and once a focus for the theatrical community and a meeting place for theatergoers, was torn down in 1968. It was replaced by an office building, now called One Astor Plaza, which took advantage of a bonus incentive permitting the construction of additional office space (profitable) if a theater (supposedly unprofitable) were to be included within its building mass. The result is an excessively highrise office building which intrudes on the prevailing scale of the square, and endangers its own financial stability as an office renting facility. For all of this, the theater district has been the beneficiary of an oversized, forbidding legitimate theater one floor up from the sidewalk level and, for good measure, a cinema in the basement.

Not only does this "improvement" wobble dangerously in its new functions, it also replaces a landmark which, along with the Times Tower (now blandly resurfaced), established the mood and character of the square as it evolved at the turn of the century. Much of the effect and power of the space was due to the architectural fallout caused by the intersection of the northwestward-rushing diagonal of Broadway as it collided with the grid at Seventh Avenue. As in previous such collisions farther downtown, an array of flatiron and wedge-shaped structures gave interest and variety to the regularity of the pattern. The relationship of the foursquare Astor to the wedge-shaped Times Tower created a dominant and identifiable focus for the theater district as it developed in the blocks east and west of Broadway.

Of course, an intensive reuse of valuable land was inevitable once the office-building wave reached Seventh Avenue. And it is not difficult to understand how developers might have overlooked the theatrical function of Times Square if incentives had not been created to ensure the inclusion of new theaters within the new and enlarged building envelopes. In a sense, the economic setbacks in the 1970s acted as a brake to further development which left us with a legacy of only four such theaters—the Uris, the Minskoff, the Circle-in-the-Square and the American Place—with which to contend.

The new highrise masses, with escalators moving up or down from the sidewalk level to theaters that are incapable of contributing to the texture of the street, rob the area of the kind of interest and liveliness that characterized what remains of 45th Street between Broadway and Eighth Avenue. Here the intense cluster of lighted theater facades on both sides of the street creates the sort of urban excitement that must be preserved in any future development.

As sites have been assembled for the further development of highrise structures, more and more theaters of proved excellence have been scheduled for demolition. Some of them—like the Helen Hayes and the Morosco—ought to be protected as landmarks, requiring any further development, if necessary, to occur in their air rights. None of this would be crucial if the newer theaters had proved to be more effective than the older ones being replaced. However, the art of creating new and workable theaters seems to have eluded some of the better talents of our age. As a result, not only are we in danger of losing the character of the theater district but of losing the quality of the individual theaters themselves. Thus far, in the process of urban renewal, tawdriness has yielded to blandness.

In a sense, the recent economic setbacks have necessitated a more rational approach to the urban revitalization of the West Side. Although the 1969 Plan for New York City predicted optimistically that large-scale developments would spread from the westerly extensions of Rockefeller Center to the very banks of the Hudson, sweeping everything before it including the theater district, it was clear by 1974 that this was not to be. The move to save the theater district by means of bonus incentives for creating new theaters within the gigantic new constructions was meaningless since the prospect of the new constructions vanished, at least for the foreseeable future.

In a sober mood, the office of midtown planning and development took stock of the real achievements of the recent past—the Sixth Avenue extension of Rockefeller Center in the 1960s, which had partially reached Seventh Avenue and Broadway by the early 1970s, and the creation of the Passengership Terminal on the Hudson—and began to plot a conservative course for the rehabilitation and upgrading of the rest. It was recognized that a new convention center somewhere near the Hudson, preferably in the West 30s or 40s just south of the new Passengership Terminal, would be an important

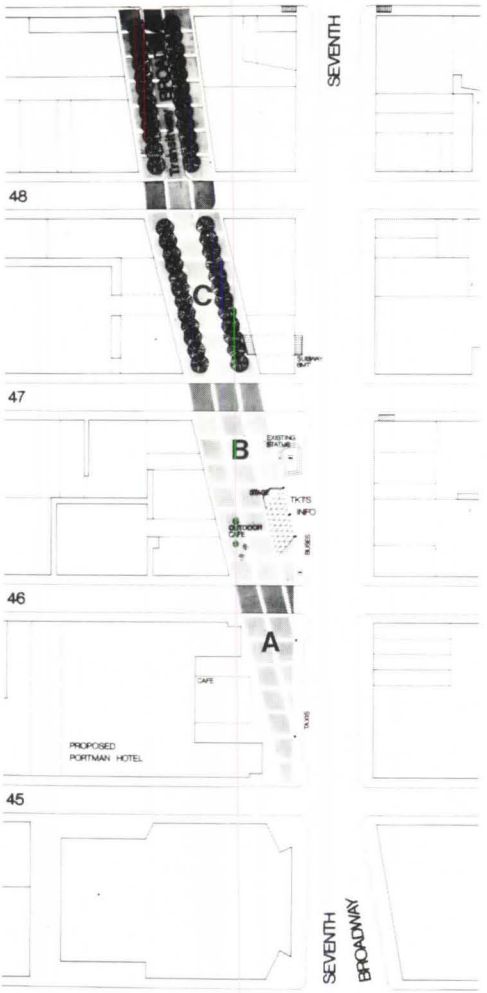
Charter buses bring sell-out crowds for matinees (below). The Times' original facade (bottom left) and today's garb.

anchor for further midtown development.

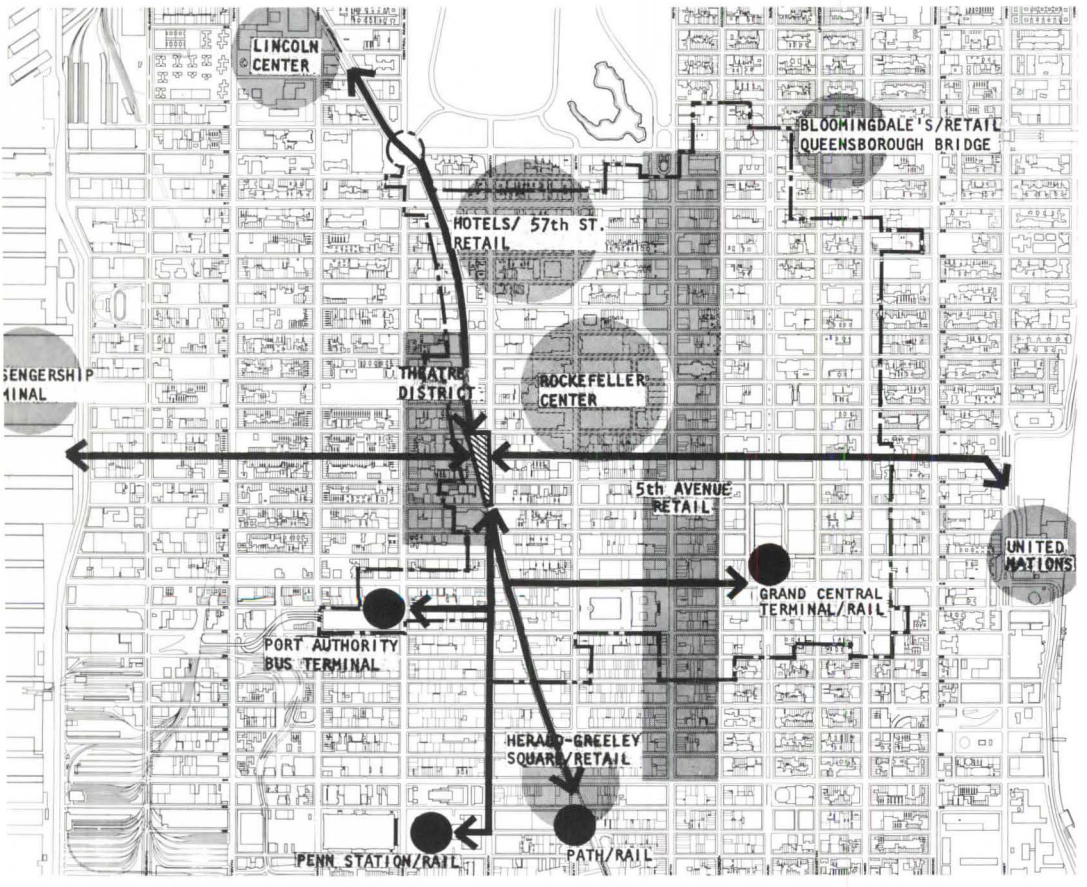
The blocks between the Rockefeller Center extension and Times Square itself —much of it occupied with small, single-room occupancy residential hotels and other marginal uses—were seen as potentially valuable as living areas for middle-income people who might prefer being close to the new office buildings. Through a combination of rehabilitation aided by a creative system of tax abatement and selective new construction, some very realistic proposals have been made which could upgrade the area right up to the edge of Times Square. The fact that this area also includes a handful of excellent theaters—the Belasco and the Lyceum, to name two—that might be preserved and enhanced is an added incentive for this particular approach to be made to work. It is also hoped that certain midblock pedestrian ways and arcades already achieved within the Rockefeller Center extensions might be continued through these adjacent blocks as well.

The proposal to create a major pedestrian space in the heart of the theater district—to be known as Broadway Plaza—is an ambitious attempt by the office of midtown planning to reinforce the image of the area as an entertainment center. The space would be the focal point for the revitalization of the entire Times Square sector and, it is hoped, would encourage the cooperation of private developers in the ultimate goal of a setting worthy of its function.

The Broadway Plaza concept would close the southbound Broadway to vehicular traffic between 45th and 48th Streets and repave the portion of the street now used for automobiles with a pedestrian surface. Crosstown traffic, however, would continue as before along 46th Street (eastbound) and 47th Street (westbound), thus dividing Broadway Plaza into three smaller but related plazas as indicated (A, B and C on the plan at left).



The resurfaced pedestrian spaces of the planned Broadway Plaza (above). Map below shows major connecting corridors and centers of activity. Small circles are transportation nodes.



Broadway Plaza would be a focal point for revitalizing the entire Times Square sector.

The approach to the plaza from the north along Broadway from 54th to 48th Streets would be modified by progressively widening the sidewalks and narrowing the roadway, thereby encouraging vehicles to turn off Broadway onto the also southbound Seventh Avenue. The final block, between 49th and 48th Streets, would be paved in a style similar to the portion of the plaza between 48th and 47th Streets and would function exclusively as a taxi and bus transitway.

It is intended that the office of midtown planning will establish guidelines for paving, landscaping, street furniture and any structures that might be required for the area. At the moment, a combined demonstration stage, information center and discount ticket booth is planned for plaza B. Plaza A, the smallest of the three, would incorporate a taxi rank on the Seventh Avenue edge and integrate spatially with the ground floor of the hotel proposed for the east end of the block, should that long-delayed project be reactivated. And it is hoped that cooperative arrangements with local restaurants might result in sidewalk cafes on plaza A and B.

As to the maintenance and treatment of the adjacent buildings that would form the walls of the plaza and the sign spectaculars that already line the space, much would depend on the cooperation of the owners of the individual buildings. Many of these buildings are basically sound and handsome structures which, over the years, have been revised and transformed according to need and, in several instances, present multiple layers of facade treatment. In many cases, only the street level is currently in use with the upper portions of the building serving only as support for giant signs. This pastiche of new over old is germane to the character of Times Square and should be considered as an essential factor in any further attempts at renewal.

To the world at large, Times Square represents the symbolic hub of the entertainment industry. In spite of its squalor, crime and general air of decay, it pre-

serves this image. It is this unique spirit and "sense of place" which somehow must be kept in any future transformation. However, this must be achieved in accordance with sound planning principles and through an enlightened balance of public as well as private development. Moreover, whatever is accomplished must result in an environment attractive enough to draw people to it and make them feel it was worth the trip.

If we are now to rely, as we have in the past, only on economic incentives in the private sector, we would have no assurance that the sum of all this building activity would add up to a "sense of place." Some sort of overall design approach would have to be established in order to be able to derive sufficient public benefit from such economic incentives. Only then could an entertainment district such as Times Square be renewed and maintained as a place with an atmosphere of humanity and joy.

Does current city planning technique provide the clues for achieving such an atmosphere? A study of downtown developments already carried out around the country and in some of the major cities of the world would indicate that it probably would not. Even London's Piccadilly Circus does not begin to encompass the range of urban complexity that characterizes the Times Square sector. The situation here is too unusual and complex to benefit from any other single example. Indeed, even on the most superficial level, the well-mannered gaiety of the Tivoli Gardens in Copenhagen would have no place here, nor would the over-blown pizzazz of Las Vegas. Since it ranks alone in its tawdry splendor, Times Square must rely solely on its own nature for the inspiration needed to effect its renewal and development.

But what is its own nature? There is something enigmatic about so much culture coexisting with so much trash. And what about the paradox of serious theatergoers and those intent on more frivolous pursuits mingling within the same spaces and seeming somehow to need to exist next to each other? Think about the cleaned-up, unstimulating theatrical areas such as Lincoln Center. Then consider the fact that Times Square, being made up of contradictions, requires so delicate a balance to maintain its distinctive atmosphere, relying neither on too drastic a clean-up nor on too great a tolerance for decay. And think of the crowds that like it as it is and would like it more if its qualities were enhanced. And consider the vision and originality that will be required of the potential shapers of this environment.

It is clear that Times Square presents a unique challenge for developing the highest level of urban design. □

In Memory Of Daniel Schwartzman

By Arthur C. Holden, FAIA

Daniel Schwartzman, FAIA, 1908-1977

Dan Schwartzman had the vision of an architect, the practical sense of a successful businessman and the social justice of a humanitarian. He was in every sense a professional architect. His natural instincts were such, however, that he would have conducted himself as a professional in any endeavor he chose to call his life's work. He possessed honesty and sincerity of purpose. He drew people to him by his humility and generosity of spirit. He had the taste, devotion and integrity that distinguish the ordinary practitioner from the gifted architect.

Dan was born in 1908 in Baltimore, where he spent his early years before enrolling in the University of Pennsylvania's school of architecture, from which he was graduated in 1931. He then studied in Paris at the École Supérieure des Beaux Arts, which gave him the opportunity to travel extensively throughout Europe.

Dan's first residential design was for his own house which won first prize in 1939 in a *House Beautiful* magazine competition. Many other residences followed, including single-family and multi-family designs in New York City and Baltimore. His second home in Sea Cliff, Long Island, was the principal focus of a *New York Times* photographic exhibit at the Brussels Exposition.

Dan earned an international reputation in department store design. His clients in this country included R. H. Macy, Bamberger's, Abraham & Straus and the Hecht Co. His international work as a consultant extended to Australia, Brazil, Spain, Belgium, the Netherlands, England, Canada and Puerto Rico.

He expressed his deep concern for young people desirous of understanding architecture and department store design through teaching for many years at Pratt Institute's school of architecture, New York University's school of retailing and Rutgers University's advanced school of retail management. He also served as guest lecturer at many architectural schools throughout the country.

Among Dan's most distinguished attributes was his intense commitment to public service in behalf of his fellow architects at the local, national and international levels.

His firm but modulated voice, and his engaging smile, conveyed his thoughts with clarity. He served as president of the Architectural League of New York, vice president of the New York chapter/AIA and trustee of the National Institute for Architectural Education. In 1971, his contributions at the state level were recognized when he received the New York Society of Architects' coveted Sydney L. Strauss award.

It was his work at the national level, however, that brought Dan to the attention of architects across the country. After serving as treasurer of AIA's 1952 national convention in New York City, he was given important assignments on several national committees, particularly in the professional practice area. Most recently, he was chairman of the international relations committee.

Dan was elected to the college of fellows in 1960 for design and service to the Institute. In 1964, he received AIA's Edward C. Kemper award, given for significant contributions to the Institute and the profession. His service to AIA continued; he was national treasurer from 1965 to 1967 and vice president from 1968 to 1969.

About Dan's work as national treasurer, David N. Yerkes, FAIA, said: "Instead of just talking about cash flow and budgets, Dan discussed policies, objectives, what AIA really ought to be doing. . . ."

As his service broadened nationally, so did his concern for the stature of international architecture. He became a member of the executive committee of the International Union of Architects (UIA), ultimately becoming its vice president. UIA appointed him as its representative to the United Nations because of his ability to articulate effectively the causes of architects throughout the world. He was an honorary member of the Institute of Architects of Brazil.

Dan was also deeply involved in community service, being concerned about the welfare of Jewish children and the place of Jewish architects in the realm of religious architecture.

For many years, he was a trustee of the Jewish Board of Guardians, a member of the Guild for Religious Architecture and chairman of the Union of American Hebrew Congregations' architectural advisory panel.

Dan Schwartzman died on Jan. 24 at the age of 68. Perhaps his career and his service to architecture can best be summarized by repeating the inscription on the Kemper award he received: "Your disciplined and constructive mind has concerned itself with one of the less glamorous phases of architecture—the intricate machinery of office procedures. Your zeal in committee study and research, your convincing reasoning in seminar and on convention platform—all in the effort to establish order and system in a vital branch of architectural practice—has earned for you the gratitude of the architects, students, interns and draftsmen of America." □

Mr. Holden, a long-time friend of Mr. Schwartzman, practices architecture in New York City.

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BOOKS

Solar Control and Shading Devices. Aladar Olgyay and Victor Olgyay. Princeton, N.J.: Princeton University Press, 1957. Paperback edition, 1976. 202 pp. $7.50.

When this book by the Olgyay brothers appeared in 1957, it was hailed as an exemplar. Not only was it an ideal model of architectural research, but it provided a thorough functionalist and analytical basis for the "intuition and fantasy" that "can really help us in achieving the essential goal" of architecture. Indeed it was.

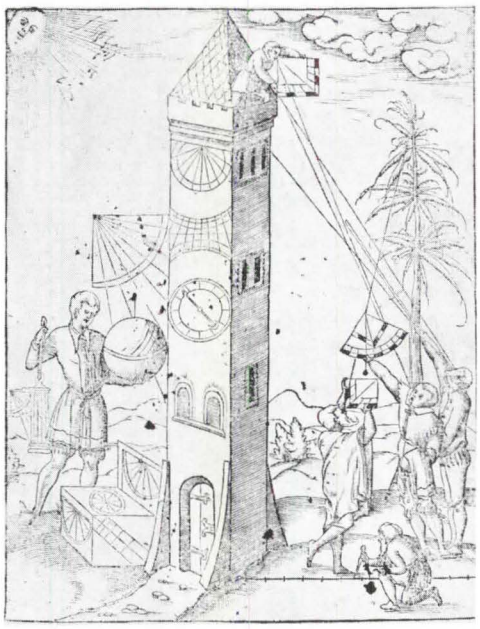
The Olgyay twins had been graduated from the Royal Polytechnical University in Budapest and won fellowships with the prix de Rome. They came to the New World with the hearty endorsement of Peter Blake and Marcel Breuer for their book *The Work of the Architects Olgyay and Olgyay* (Reinhold, 1952). Originally published in 1946, with captions in English and Hungarian, it was part of a series on "Arts and Artists in Hungary."

Earlier, the Olgyay brothers had designed Hungary's pavilion for the New York World's Fair. Despite their auspicious introductions, they did not initiate a splashy practice that might have continued to develop their strong, internationalist work with its characteristic pseudo-scientific determinism. Rather, they plunged with double energy into discovering and defining some fundamental laws that might govern a universal approach to architecture.

Their subject was the sun and its interaction with the form and performance of building. With the encouragement of Robert W. McLaughlin, then director of Princeton University's school of architecture, they examined in depth the technique of designing with the sun. Then they signed their cooperative work, like the fraternal twins they were, Olgyay and Olgyay. They both had top billing.

Solar Control and Shading Devices summarized more than a decade of intensive research punctuated by a series of papers, articles and publications in proceedings. It was a succinct statement of directed methodology based on facts. It was scientific research of architecture as it has seldom been demonstrated, and with the intensity of double intelligence. Architecture was made scientific in a method, but not "à la mode." The Olgyays conceived of the walls of a building as "radiation filters" and they systematically compared the exteriors of buildings designed by Mies, Harrison & Abramovitz, SOM and Le Corbusier for performance.

By 1957, however, the stylistic mirage of a functional determinism had already been cast, not by the brise-soleils of Unités, but by slick skins of Lever houses. Both are among the worldwide examples of modern buildings the Olgyays examined and documented, using their "shading mask" as well as plans, sketches and photographs. Almost encyclopedically, they illustrated and analyzed the most promising of the first decade of postwar architecture, using their solar techniques, ordered as a "vocabulary of shading devices." Their unmuddled scholarship was fresh in both its technical analysis of the problems and its practical demonstration of solutions.



What has happened to the exterior of buildings in the two subsequent decades is already a matter of history. The visually packaged diversion of curtain-walled prisms of world cities are only now being challenged as being brutally insensitive to the facts of the earth. Their mirrored presence might, in part, be laid on the illiteracy of the profession. For the Olgyays, in word and almost endless illustration, had published a discipline of architectural response to the most common denominator of life on earth: the sun. The 1957 Olgyay evolution of principles of a solar architecture has languished on the library shelf, only to be noticed in the latest crisis.

The book's core of fundamentals includes an easy diagrammatic visual tool. The authors look at over 100 built structures, analyzed by applying the tool. The architectural examples fill the gamut of taste and style, size and function. Together they illustrate the esthetic infinity of solar integrity.

This reviewer's experience in using the Olgyays' shading mask for several years, both professionally and in undergraduate and graduate studio exercises, only confirms the viability and potency of the method. For the architect who has any concern about sun control, this is the definitive text. Obviously, that includes all who indulge in the latest fad for solar hardware. But it also includes those who would honor the most elementary disposition of architectural openings to our nearest and most radiant star. The reissue in paperback form, two decades later, of the Olgyays' classic study, without any alteration, is not only a timely reappearance of a generic source book, but an incentive for its use by the broadest constituency. Godspeed to the book in its influence this time. *Jeffrey Cook, AIA*

Energy and Architecture. *The Journal of Architectural Education,* Feb. 1977. Washington, D.C.: Association of Collegiate Schools of Architecture (1735 New York Ave. N.W., Washington, D.C. 20006). 72 pp. Free, including postage and handling.

The job of energy conservation is not going to be accomplished by removing light bulbs, the *New York Times,* commented editorially on Nov. 31, 1975. "What is required is a radical design approach to declining resources. There was an architectural revolution near the beginning of this century, and it now appears there may have to be another before the end."

This quote from the newspaper is given

continued on page 64

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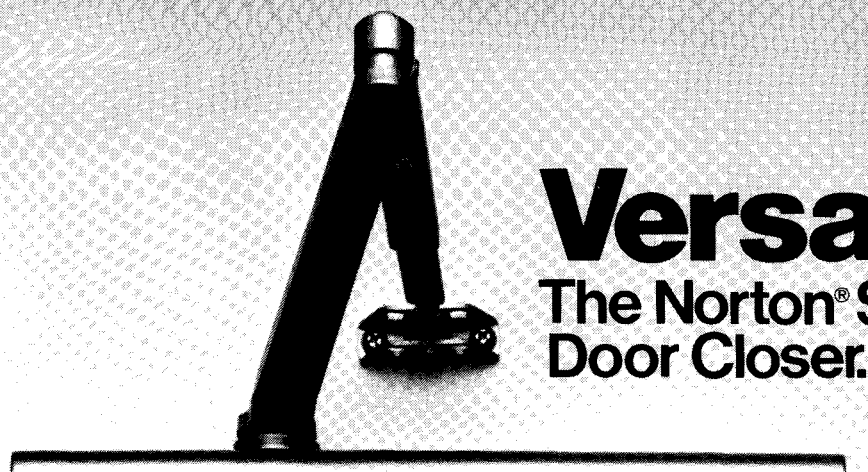

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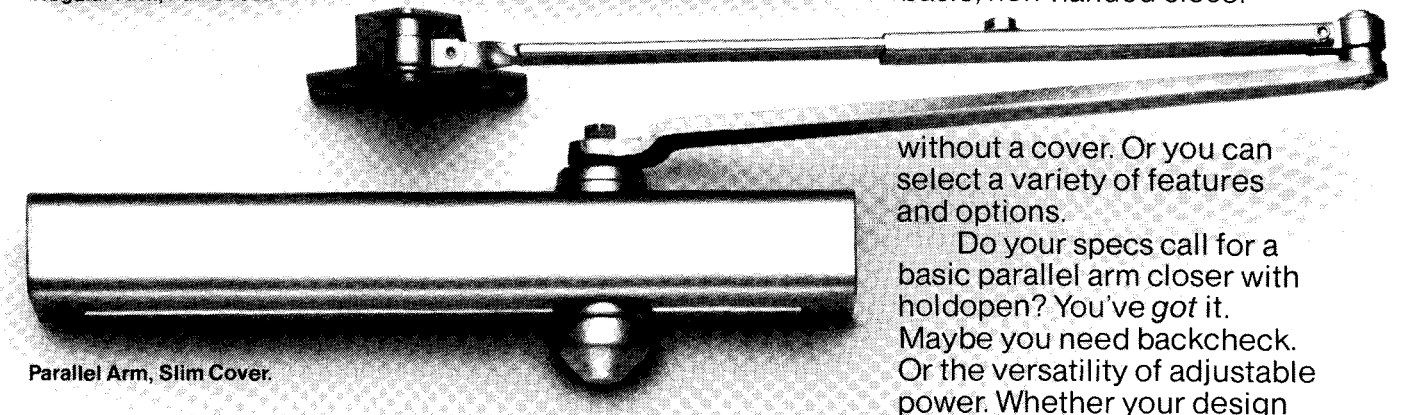

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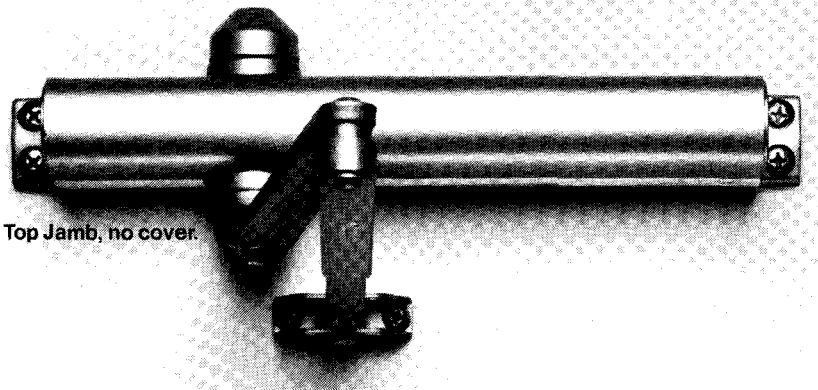

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in an editorial by Donald Watson, AIA, guest editor of the most recent issue of the *Journal of Architectural Education* (vol. 30, no. 3, Feb. 1977, published by the Association of Collegiate Schools of Architecture). The special issue on "Energy and Architecture" goes far beyond light bulbs. All the articles, as Watson says, "accept the given that energy is intrinsic to design." Each contributor was selected carefully to report on "current work in design, education and research that addresses unique aspects of energy and architecture."

The idea for the issue was conceived at ASCA's 1975 teachers' seminar on "Energy Conscious Design," co-sponsored by the AIA Research Corporation. Watson was a fortunate choice as guest editor of the special issue. The author of the recently published *Designing and Building a Solar House* (to be reviewed by an eminent authority at a later date in this magazine), Watson is well versed in the relationship of architecture to energy conservation. He has designed or consulted on more than 80 solar houses, including projects he has worked on for the United Nations, the Energy Research and Development Administration and HUD.

Among the articles in the information-packed magazine: "Energy Conscious Design in Schools of Architecture," by Marguerite Villecco; "Optimum Building Shapes for Energy Conservation," by Esher Balkan Berköz; "Observations on Energy Use in Buildings," by Richard G. Stein, FAIA; "Energy Conservation Through Life-Cycle Costing," by Harold E. Marshall and Rosalie T. Ruegg; "Solar Energy, Building and the Law," by Ralph Knowles, AIA.

David Clarke, executive editor of JAE, says that this offspring of the magazine "is so strapping" because "considerable midwifery assisted at birth." Grants for the original 1975 conference on "Energy Conscious Design," from the Graham Foundation for Advanced Studies in the Fine Arts and the National Science Foundation's program on research applied to national needs (RANN), helped make the conference possible. For this special issue on "Energy and Architecture," assistance came from the National Endowment for the Arts (which regularly supports JAE in part) and from the National Bureau of Standards' center for building technology. An additional grant from NSF/RANN makes this issue free to those requesting it. Ask ASCA for a copy. It is well worth reading carefully and then filing away for future reference.

Dimensions: Space, Shape and Scale in Architecture. Charles Moore and Gerald Allen. New York: McGraw-Hill, 1976. 183 pp. $12.95.

This book, an anthology based primarily on previously published pieces by Charles Moore and Gerald Allen, is reminiscent of Robert Venturi's *Complexity and Contradition*. Like Venturi's book, *Dimensions* is a "gentle manifesto," presenting an alternative view to that of "orthodox modernism." While its point of view is quite similar to that of *Complexity*, it differs in that it is put forward in an atmosphere where the basic case against orthodox modern architecture has been made and where there is renewed interest in the intricacies of earlier buildings.

Moore and Allen use a simple, conversational style, perhaps harking back to Sullivan's *Kindergarten Chats;* the result is a comfortable, nonthreatening and readable book. The series of essays includes an analysis of St. Thomas Church, the Santa Barbara County Courthouse and Hadrian's Villa, among others; the limitations of one contemporary building (the Minneapolis Federal Reserve), and the contribution to public experience of such projects as Rockefeller Center, the Cannery and Disneyland. The regional characteristics of architecture in various parts of California and the South are also described, and there is a brief and human appraisal of Rudolph M. Schindler and H. H. Richardson.

In a chapter on housing design, Allen presents a case against the orthodox modern approach of separating out programmatic requirements for a building and assigning a given square footage to each. The problem, of course, is that reality is far more complex and contradictory than

continued on page 68

***Model 3352**–Photographed at the Hyatt Regency, San Francisco.*

Deftly executed in polished stainless steel, this drinking fountain by Haws was designed in the tradition of elegant simplicity to complement the most resplendent interiors that can be created by man. The columnar pedestal is pure, of classic proportions, and atop, the sculpted receptor is ridged to prevent splashing. Model 3352 is true perfection in a metallic alloy that is timeless.

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Steel frame saves $2,000,000 for New Court Facility in District of Columbia

Problem: The efficiency of Washington, D.C.'s courts was severely hampered by having its various courtrooms housed in several buildings. The arrangement proved particularly cumbersome to its 1,100 employees.

Solution: Design a 700,000 sq ft building to house the required 45 courtrooms, judges' chambers, and various support areas. And, at the same time, provide completely separate circulation patterns for the judges, the public and general staff, and for prisoners.

Bethlehem furnished approximately 5,000 tons of ASTM A572 Grade 50 high-strength steel for the courthouse.

Owner: Department of General Services, Washington, D.C.
Architect: Hellmuth, Obata & Kassabaum, P.C., Architects, Washington, D.C.
Structural Engineer: Jack D. Gillum and Associates, New York, N.Y.
Fabricator: Montague-Betts Company, Inc., Lynchburg, Va.
Construction Manager: Gilbane Building Co., Inc., Providence, R.I./ Paul R. Jackson Construction Co., Inc., Washington, D.C., Joint Venture.

The courthouse features completely separate circulation patterns for judges, for the public and general staff, and for prisoners. The $40-million structure consists essentially of two buildings connected by an elevator bank on one side and a circulation corridor on the other, creating an atrium in the center.

Steel found most economical

Several design schemes in both structural steel and reinforced concrete were evaluated by the construction manager during the preliminary design phase. It was concluded that $2,000,000 in structural costs could be saved by using a high-strength structural steel frame. The savings result from (1) lower in-place materials costs, (2) time saved in erection, and (3) lower foundation costs due to the lighter steel structure.

Tight budget limitations required that the project be fast-tracked to telescope the design and construction periods. By reducing overall construction time, maximum area could be provided for the funds available.

The designers were also able to take advantage of steel's excellent flexibility during the design/construction process. By making adjustments through early insights into field conditions, the designers were able to increase design quality, while decreasing costs.

The framing scheme

The framing scheme consists of 3-in.-deep composite metal floor deck, utilizing electrified cells as required, supported by composite steel beams spaced at 10 ft 4 in.on center.

Lateral loads are transferred to the columns by 16 wind bracing towers (8 in each direction) located in the cores. Double angles, field bolted at their ends and centers, are used for the cross bracing. Typical bays are 31 by 31 ft and 31 by 62 ft.

Books from page 64

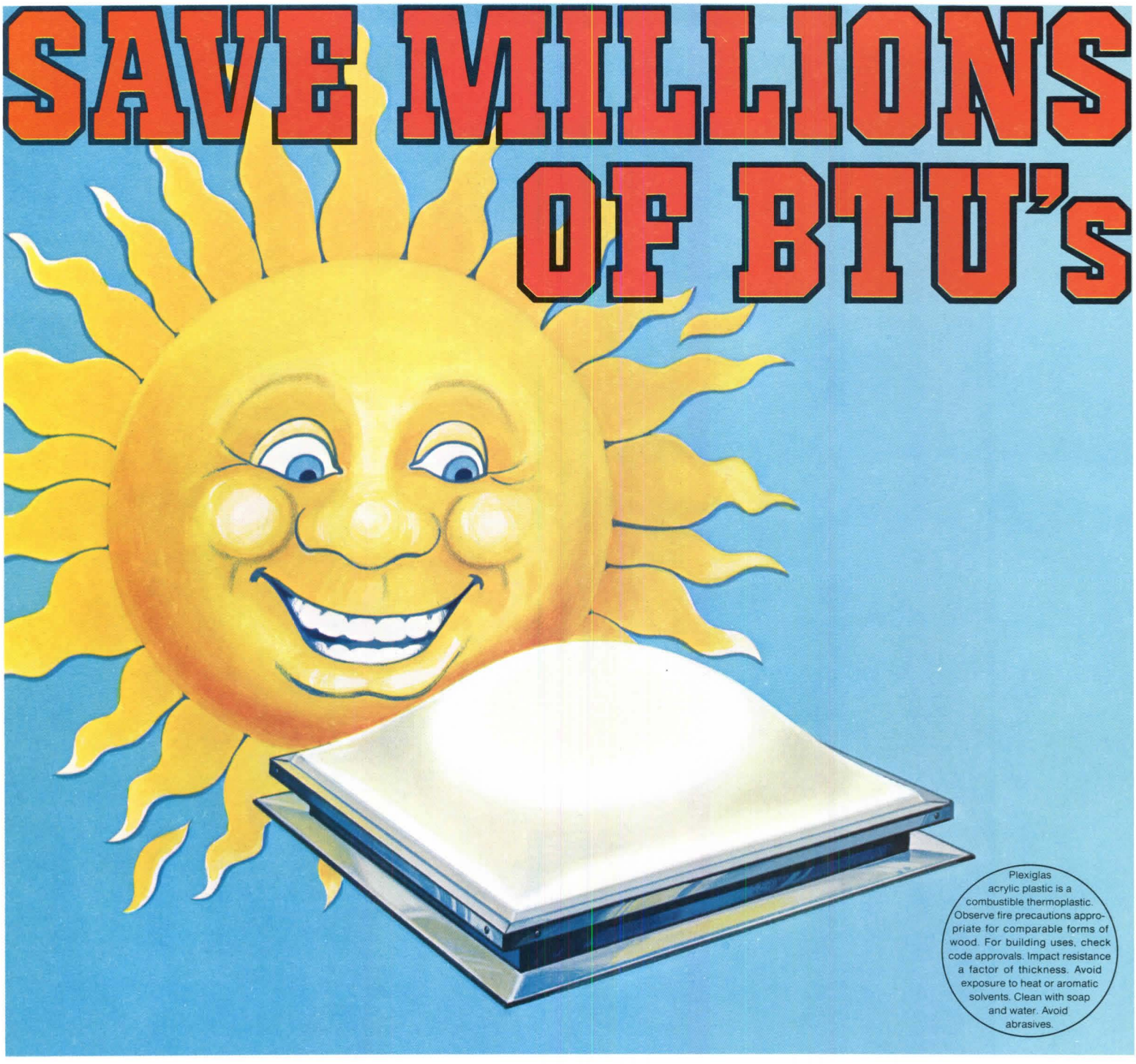
is this method based on simplicity and consistency. As a result, architecture has been contributing to specialization, discrimination and alienation in our environment rather than working to alleviate these things. Allen's point is well taken although not developed. Allen and Moore are aware of the brevity of their arguments, stating in the book's preface: "These chapters are intended to be simple and concise, and so they may also seem to lack subtlety. We hope that they also seem clear." They do seem clear and enjoyable, and I hope they reach a large audience. Readers who do wish to pursue these ideas will always find more material. *John Lobell, Associate Professor of Architecture, Pratt Institute*

Cast Iron Decoration: A World Survey. E. Graeme Robertson and Joan Robertson. New York: Whitney Library of Design/Watson-Guptill Publications, 1977. 336 pp. $27.50.

The authors were a father-daughter team from Australia (he died before publication) with a profound appreciation for cast iron. By way of introduction is a description and history of the manufacture of cast iron, contrasted with wrought iron, along with an overview of the various design motifs and where they are likely to be found. Then come chapters by locales, keyed to the plates that follow: the British Isles, Europe, the U.S., Australia and New Zealand and finally "empires and influences," a catchall which includes Bombay, Tahiti, Canada and Mexico. The meat of the book is the collection of more than 500 photographs and drawings which demonstrate the remarkable range of use and beauty to which cast iron was put. A glossary and a bibliography contribute to the book's usefulness. Overall, an attractive volume.

Recycling Buildings: Renovations, Remodelings, Restoration and Reuses. Elisabeth Kendall Thompson, FAIA, editor. New York: McGraw-Hill, 1977. 213 pp. $19.50.

Originally published in *Architectural Record,* the projects discussed and copiously illustrated here provide a broad-ranging and thorough survey of the subject. Covered are new dwellings in old buildings, old buildings remodeled for business and industry, rehabilitation for community use, renovation for continuing the same use, restoration of historic buildings and major additions designed to preserve neighborhood character. As the publisher says, "This is, above all, an *idea* book documenting the innovative ways that creative architects have given new life to old buildings and in the process skirted inflated labor and materials costs of new construction." □



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Up to now, there have been four entry categories in the Owens-Corning Energy Conservation Awards Program. This year winners will be selected from *five* design categories:

Institutional—schools and hospitals, for example.

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Governmental—post offices, administrative buildings, military structures, to name a few.

Special—new or existing buildings, projects, or complexes that are not included in preceding categories.

Who can enter

Any registered architect or professional engineer practicing in the United States is eligible. As an individual. Or in a team.

But to qualify, your entry must be a commissioned building project—in the design process, under construction, or a completed structure.

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The Awards

Winning architects and/or engineers will receive "Triangles," the handsome Steuben crystal sculpture shown at left. Owners or clients will receive other Steuben crystal awards.

The Awards Jury for 1977

Outstanding professionals in architecture and engineering will serve as the Awards Jury to select the winners.

Send for entry details now

Completed entries must be submitted by July 31, 1977. Winners will be selected and notified in early October.

For a brochure with details on how to enter your energy-saving designs, write: G. N. Meeks, Owens-Corning Fiberglas Corp., Building Products Operating Division, Fiberglas Tower, Toledo, Ohio 43659.

This program has been approved by the American Institute of Architects and is patterned after its Honor Awards Program.

◀ *The Owens-Corning Energy Conservation Award. "Triangles," a Steuben crystal sculpture that captures and reflects light from multiple triangular planes.*

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Going On from page 24

NIBS Funding Supported

AIA has urged Senate and House subcommittees on appropriations to support the National Institute of Building Sciences with an appropriation of $3 million for fiscal 1978. NIBS, authorized by the Housing and Community Development Act of 1974 (PL 93-383), is a nongovernmental, nonprofit organization established to foster the improvement of the built environment through innovations in building technology and standards and through more effective use of the nation's building resources. Federal funding of $5 million in each of two successive years was authorized, with the anticipation that NIBS would become self-supporting within a five-year period.

John McGinty, FAIA, president of the Institute, told chairmen of the Congressional subcommittees that "delays in staffing and organization have made it impracticable for NIBS to justify an appropriation of $5 million or $10 million." He stressed, however, that AIA supports NIBS' budget request of $3 million for 1978.

McGinty noted that NIBS has been assigned a role in the development of energy conservation performance standards for new buildings under the authority of the Energy Conservation and Production Act of 1976 (PL 94-385). "Failure to finance the first year of NIBS' operation will severely hamper its ability to assist in this and other vital activities," McGinty said.

Scanner Spots Heat Loss

An Environmental Protection Agency-assisted project in 26 Minnesota communities may become a model for controlling energy wastes throughout the nation, says EPA. At the request of the state's energy agency, EPA and the Energy Research and Development Administration had specially equipped aircraft fly over the communities to record heat loss from rooftops, underinsulated pipes, exposed industrial equipment and other objects.

Energy loss was searched out by the aircraft with a thermographic scanner. The scanner has the capability of taking photographs that are sensitive to infrared radiation, whose wavelengths are longer than those of visible light. Such photographs were able to detect heat loss, the escaping heat showing up as lighter tones. Colder surfaces, such as well-insulated roofs, showed up in darker tones.

The processed infrared photographs were compared with conventional shots of the same area, thus helping identify heat loss from individual buildings.

The infrared photographs will be made available to the public, and a "how-to" manual is being prepared for use in other states and localities. EPA specialists are also training citizens in the surveyed communities to interpret the photographs to others.

The thermographic scanner, developed for military purposes, can take infrared photographs at an altitude of about 3,000 feet. Heat scanning has been used elsewhere in the U.S., but EPA believes that the equipment used in the Minnesota project "has produced the best photos ever done in this genre." The scanner, says EPA, "has great potential for keeping track of harmful substances." It could indicate, for example, the extent of oil spills and septic tank seepage.

For more information on the scanner program, write Tom Osberg, EPA/EPIC, Box 1587, Vint Hill Farms Station, Warrenton, Va. 22186.

Deaths

Erdmann Walter Burkhardt, FAIA, Auburn, Ala.
René De Blonay, South Salem, N.Y.
Donald A. DeJerf, Long Beach, Calif.
John R. Diehl, Princeton, N.J.
Sidney A. Finck, Chicago
Kenneth H. Hess, Ventura, Calif.
S. Martin Ives, Granada Hills, Calif.
William Koblik, Sacramento, Calif.
Gordon S. Marvel, Washingtonville, N.Y.
Leland H. Niles, Amsterdam, N.Y.
Chester Root, FAIA, Los Gatos, Calif.
Mario Sergio, Kearny, N.Y.
Anthony Charles Strong, Media, Pa.

Newslines on page 77

"The Architect in charge

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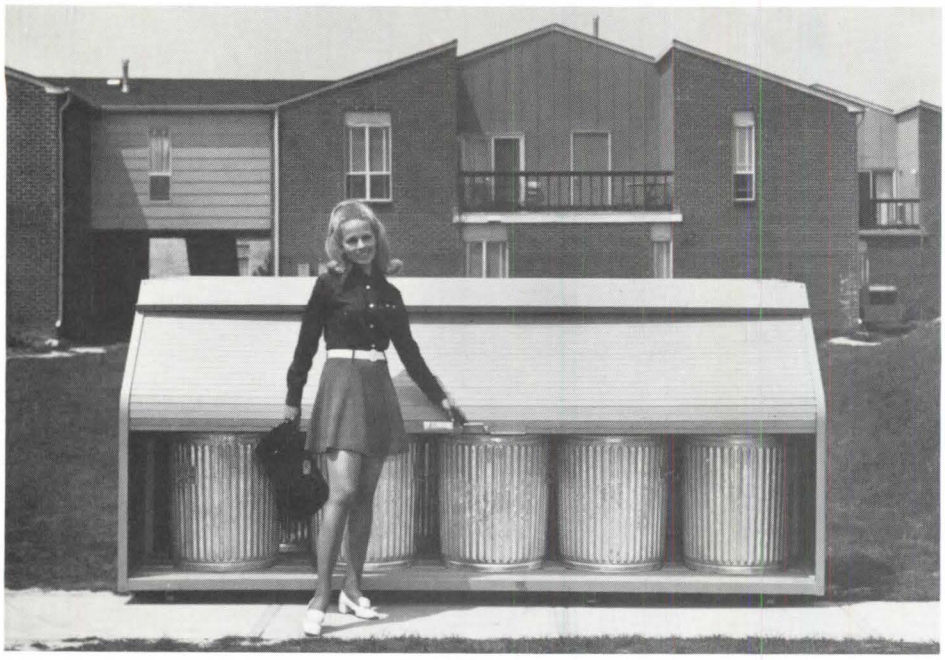
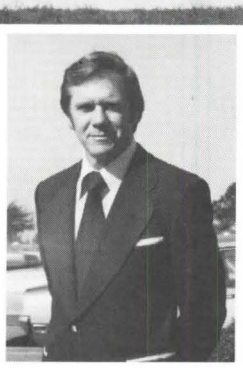


Tee-M Storage System units are perfect for apartment trash storage because they're convenient, attractive and easy to maintain. Shown here is model TM 1030 DD, with ample space for ten 30-gallon cans.



Raymond Berry, former Baltimore Colt great and a member of the National Football League of Fame, acclaims Tee-M Storage Systems' quality and durability. Berry is J. G. Wilson's current Champion for a Better America.

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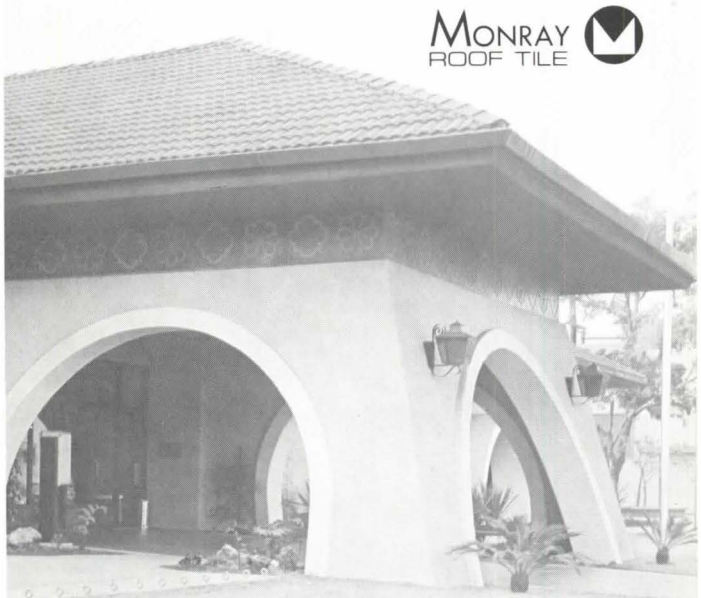

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Newslines

The Conference for Women in Design and Planning's proceedings are being published. The conference, held in 1975, included lectures, panel discussions and workshops on the special problems and issues common to women in the design and planning fields. The publication will include transcripts of such lectures and discussions as "The Status of Women Working in Design and Planning," "Issues of Power and Achievement" and "Balancing Family and Profession." The proceedings may be obtained for $1.50 per copy from: Conference Publication, 34 Greenough St., Brookline, Mass. 02146.

A master of architecture degree is now offered by the University of Miami, Coral Gables, Fla. The new research-oriented program involves two years of study. Applicants will be accepted for the fall semester.

Architects and engineers are now being employed by banks and other lending institutions to review all construction proposals submitted for loans, reports *PC News,* published by the Producers' Council, Inc. Banks, says PC, are "having increasingly more to say in specifications and product selection and are demanding quality."

Charles E. Peterson, FAIA, of Philadelphia has received a citation signed by the Department of Interior secretary in recognition "of his numerous, significant and sustained contributions toward the fulfillment of this nation's conservation goals and preservation of its cultural heritage."

Earthquakes throughout the world killed as many as 655,000 people in 1976, according to the U.S. Geological Survey. Records have been kept about earthquake occurrence for only about 200 years, but the earth's changing physiognomy can be traced for about 180 million years, say geologists.

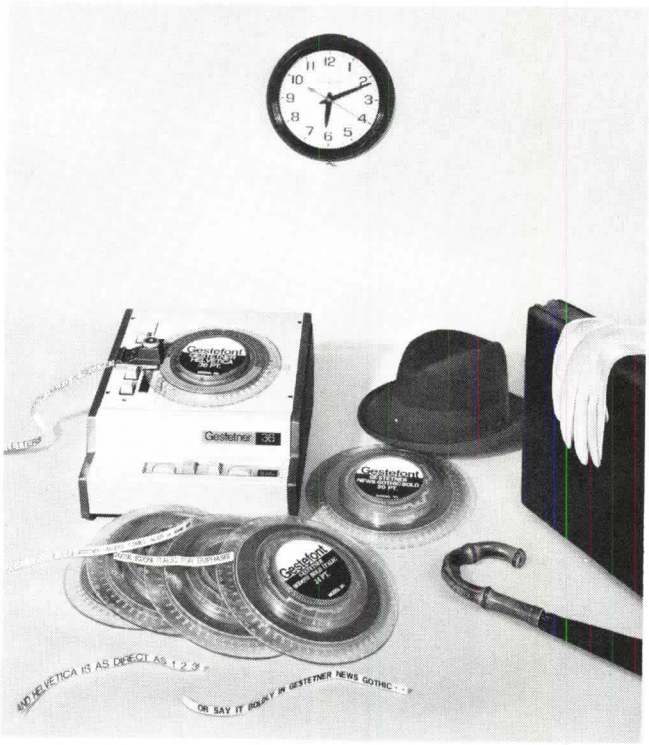
A scholarship fund has been established at the University of Nebraska by the Omaha A/E firm of Kirkham, Michael & Associates. The sum of $1,500 will be awarded annually to a student in the college of architecture and one in the college of engineering. The scholarship program is in memory of Stanley Michael, a founder of the firm, and in honor of cofounder Rowland Kirkham, now retired.

Solar energy programs are being conducted in 35 states, and 36 universities are conducting solar research and development with budgets exceeding $100,000. So says *Solar Update,* a publication of the Environment Information Center (292 Madison Ave., New York, N.Y. 10017). It is a guide to 200 organizations, 24 Congressional committees, 31 federal agencies, 74 trade and professional associations and 37 information centers. Its cost is $27.50.

Ada Louise Huxtable, Hon. AIA, architectural critic and board member of the *New York Times,* has received the Thomas Jefferson medal in architecture, University of Virginia. She is the first woman to receive the medal which has been awarded annually since 1966.

"Service World International" is a new magazine that covers the hotel/restaurant/tourism fields on a worldwide basis. A limited number of free subscriptions are available to AIA members who specialize in hotels, restaurants and similar projects, especially on an international basis. Contact: Julie R. Woodman, Editor, at 5 S. Wabash Ave., Chicago, Ill. 60603.

"Basic Energy Conservation Code/1977" is the title of a publication issued by the Building Officials and Code Administrators International. It consolidates into one volume the energy conservation provisions in BOCA's "Basic Code" series. It is available for $5 from BOCA, 1313 E. 60th St., Chicago, Ill. 60637. □



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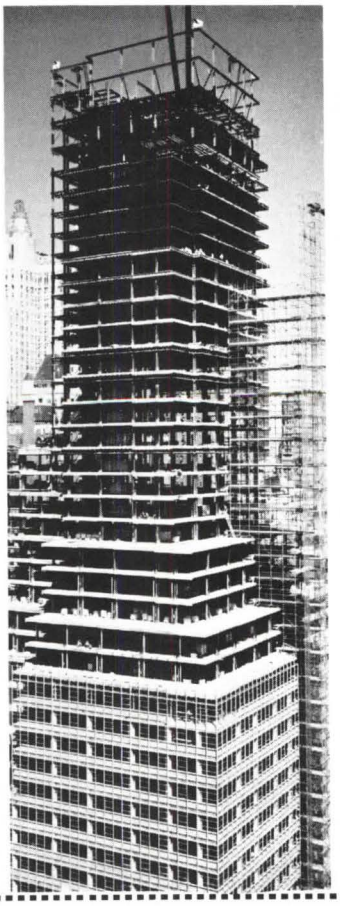

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