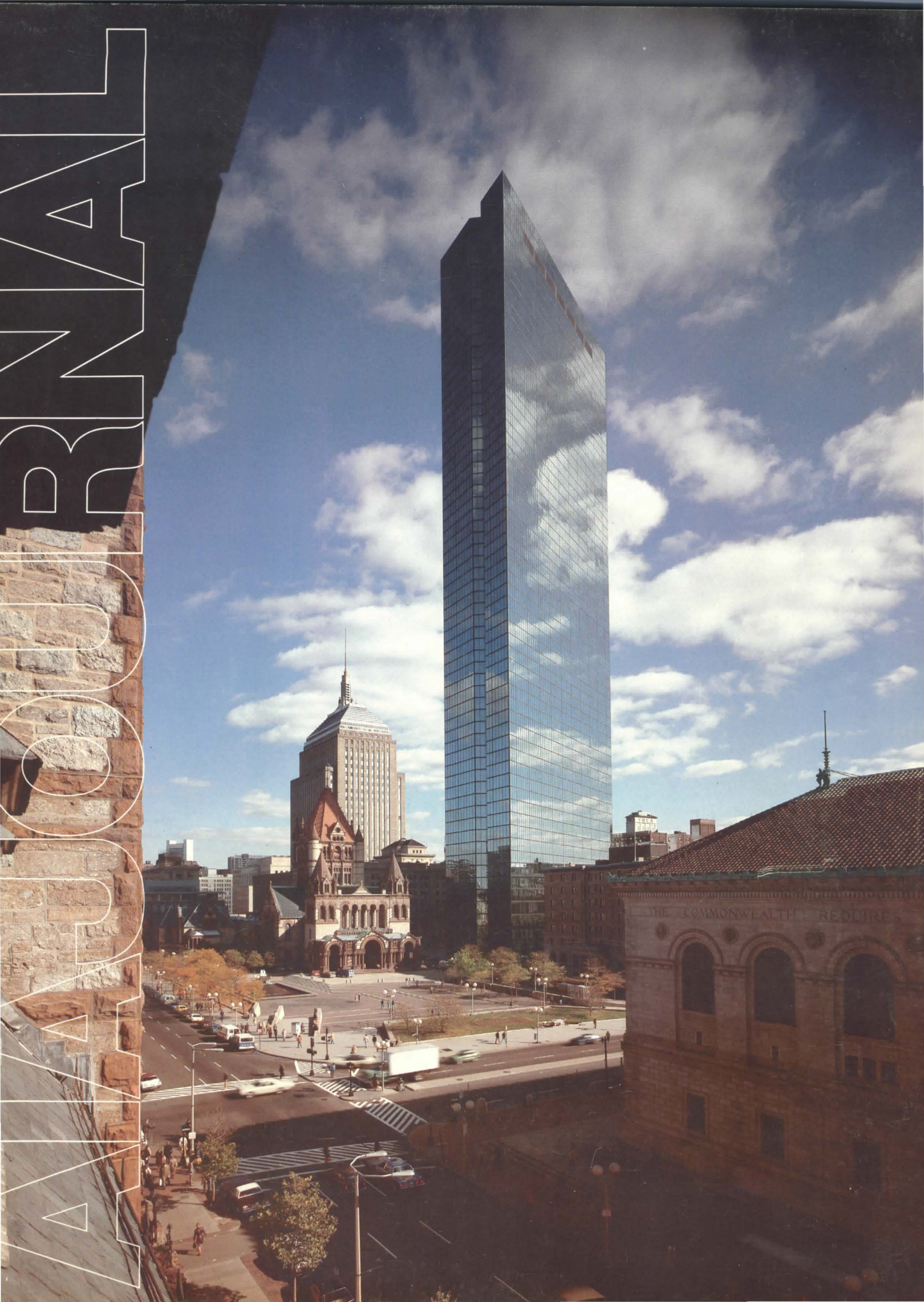
JOURNAL



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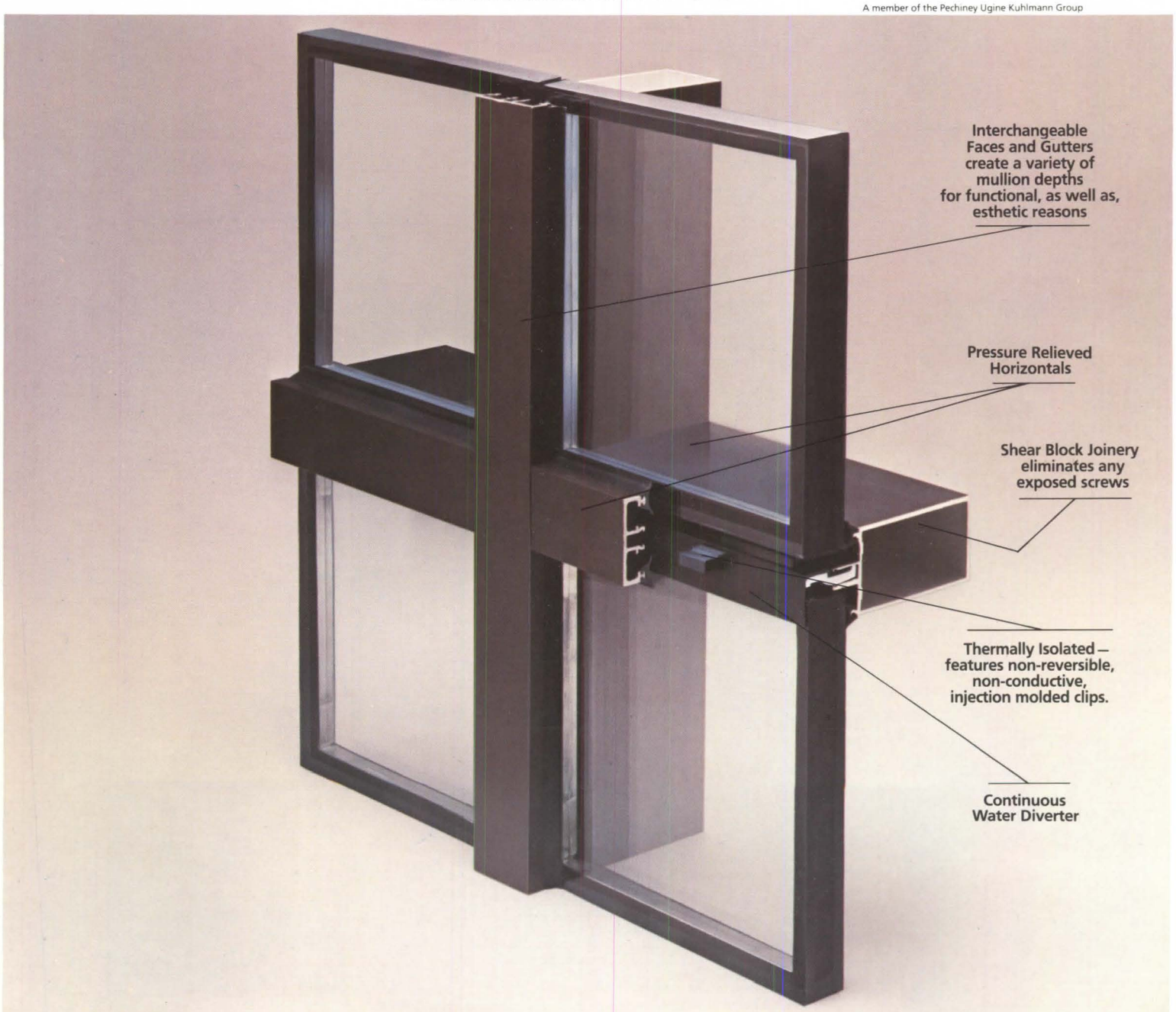

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CONTENTS

Cover: Photograph by Steve Rosenthal of Boston's John Hancock Tower, by I. M. Pei & Partners (see page 18).

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VOL. 69, NO. 14.

EVENTS

Jan. 5-9: Course on Commercial/Industrial Energy Auditing, University of Wisconsin, Madison.
Jan. 10: Expo '81: Wind and Solar, Jordan Collega, Cedar Springs, Mich.
Jan. 12-13: Evaluation of Structural Failures Institute, University of Wisconsin, Madison.
Jan. 12-14: Seminar on Fundamentals of Finance and Accounting for the Nonfinancial Executive, Chicago, sponsored by Wharton, University of Pennsylvania. (Repeat seminars: Jan. 12-14, Philadelphia; Jan. 19-21, New York City; Jan. 19-21, Houston; Jan. 21-23, San Francisco; Jan. 21-23, Phoenix; Jan. 26-28, Boston; Jan. 28-30, Washington, D.C.) Contact: Wharton Fund-F Seminar, University Conference Center, 14th Floor, 360 Lexington Ave., New York, N.Y. 10017.
Jan. 12-14: Roof Inspection, Diagnosis and Repair Seminar, Denver, sponsored by the Roofing Industry Educational Institute. (Repeat seminars: April 14-16 and May 19-21, Denver.) Contact: RIEI, 6851 S. Holly Circle, Suite 250, Englewood, Colo. 80112.
Jan. 15-16: Designing with Plastics Seminar, Boston, sponsored by the University of Lowell, Lowell, Mass. (Repeat seminars: Feb. 5-6, New Orleans; Mar. 5-6, Chicago.)
Jan. 15-16: Workshop on Zoning for Solar Access, University of Wisconsin, Madison.
Jan. 18-20: Architects' Seismic Seminar, Comstock Hotel, Reno, Nev., sponsored by the Northern Nevada Chapter/AIA and University of Utah, graduate school of architecture. Contact: Raymond Hellmann, AIA, 137 Vassar St., Reno, Nev. 89502.
Jan. 21-23: Conference on Clean Air and Economic Growth, San Francisco Hilton, San Francisco, sponsored by the Air Pollution Control Association. Contact: APCA, 939 Ellis St., San Francisco, Calif. 94109.
Jan. 23-25: Alpha Rho Chi, professional architectural fraternity, convention, University of Houston Continuing Education Center, Houston. Contact: R. Wayne Burford, AIA, 3333 Eastside St., Suite 142, Houston, Tex. 77098.
Jan. 23-26: National Association of Home Builders annual convention and exposition, Convention Center, Las Vegas. Contact: NAHB, 15th and M Sts. N.W., Washington, D.C. 20005.
Jan. 24: Earth Sheltered and Passive Solar Housing Program, Jordan College, Cedar Springs, Mich.
Jan. 26-29: International Air-Conditioning, Heating, Refrigerating Exposition, McCormick Place, Chicago. Contact: International Exposition Co., 200 Park Ave., New York, N.Y. 10166.
Jan. 31: Nominations deadline, Pritzker Architecture Prize. Contact: Carleton Smith, 230 Park Ave., Suite 751, New York, N.Y. 10017.
Feb. 4-7: Design in Aid of Fantasy Conference, San Francisco. Contact: San Francisco Center for Architecture and Urban Studies, 305 Charleston Building, 251 Kearny St., San Francisco, Calif. 94108.
Feb. 9-11: Course on Design of Reinforced Masonry Structures, Sheraton Motor Inn, Route 18, East Brunswick, N.J. Contact: Center for Professional Advancement, Box H, East Brunswick, N.J. 08816.
May 17-22: AIA convention, Minneapolis.

LETTERS

'Our Self-Educated Minority': I applaud John Hartray's point (Oct., p. 40) deploring the decision of state licensing boards to deny certification to those who haven't gone to architectural school. It's too bad to see the bureaucratic tail wagging the professional dog. We need all the creative talent we can get. We don't need the kind of arrogance that says only formal training produces innovation, talent and genius. *Stephen A. Kliment, FAIA*
New York City

Bravo, Mr. Hartray! Your defense of those of us who have become registered architects without receiving an architectural degree is beautifully stated.

In the 16 years that I worked for my registration, I believe I became as qualified as most graduates. Granted, my education was much less structured than theirs, but it was nonetheless thorough.

To limit registration to graduates only is to make architecture a dead end profession for many talented individuals who are not pursuing a formal degree. The profession of architecture can only be weaker in the long run. *Ray M. Smith, AIA*
Headland, Ala.

The profession should be reminded that in addition to famous architects such as Sullivan, Wright and Mies, there are many good architects who served their communities quite well without any formal education beyond high school. In the Los Angeles area, two names immediately occur to me: Henry L. Wright, FAIA, president of the Institute in 1962-63, and Arthur Mann, FAIA, one of the founding partners of DMJM. I am sure there are more examples throughout the country.

I am licensed in California, Arizona and Hawaii and hold a NCARB certificate. I have no formal education beyond high school. At the time I took my initial examination in California, a NCARB approved examination, I was one of two people out of 200 who passed all sections at the first taking. I did this 10 and a half years after I was out of high school, after having spent two and a half years in the armed services.

I think NCARB has confused education with accredited school attendance.

I strongly recommend that experience requirements be increased and then that an examination be designed that will determine the applicant's competence to practice. It would be a shame to deny equal opportunity to individuals who obtain their education outside the ivory tower. *Raymond Ziegler, FAIA*
Los Angeles

'Media Events?' While competitions may not be well suited to the selection of real architects for real buildings, they do provide unique records for the architectural family album, Polaroid shots capturing instantly and with minimum loss of resolution the current state of our art (see "How Competitors View Competitions," Aug., p. 56).

Today's competitions are media events. What with architecture as building slipping into the hands of nonprofessionals, and architecture as art either following suit or merely slipping into obscurity, we can certainly use the publicity. The question is whether to sell good design to the public or to just sell out; and, since it's more expedient to modify our own standards than to raise the public's expectations, what the hell? Responsibility was a drag anyway. So design not for use, but for publication. Periodicals become boutiques, catalogs of this season's styles and their media-star creators. New is good; unexpected is better. Irreverence. Inappropriateness. *Shock value!*

And the movement feeds on itself. The same people are asked to compete over and over. Prequalify. We want only proven winners here. Screen out the unknown. Better yet, select a jury to select from a group of preselected entrants. But don't stop there. Our local AIA has already gone one better, recently announcing (in suitable-for-framing poster form, with life-sized portrait and copious quotations) an awards competition in which His Majesty, the Calvin Klein of architecture, Philip Johnson, will single-handedly pass judgment on this region's design work of the past 35 years. No need to actually visit the buildings; their real significance is only two-dimensional (publishable) anyway.

And for the final touch, Philip will issue his proclamation by totally appropriate media mode: videotape to be instantly replayed to the hero-starved hordes out here in the sticks. Only electronic media could react so quickly to ensure that the results are not passé before they are released. And the winner is? Who else? Philip Johnson. *J. Christopher Kirk*
Seattle

Letters continued on page 69

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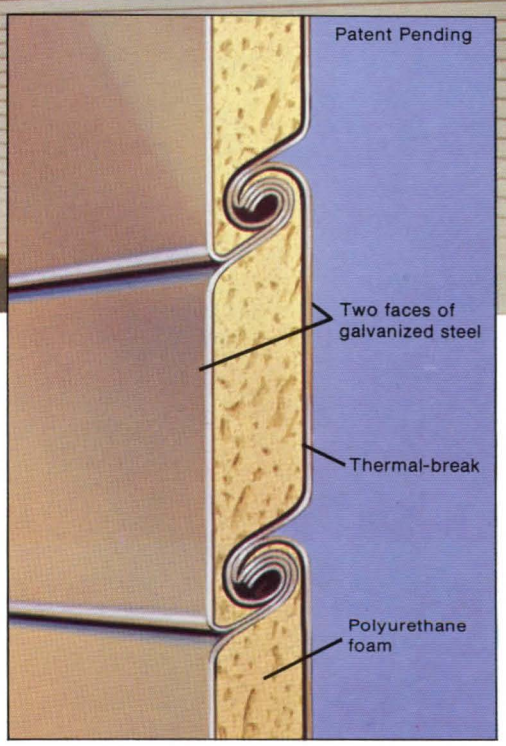

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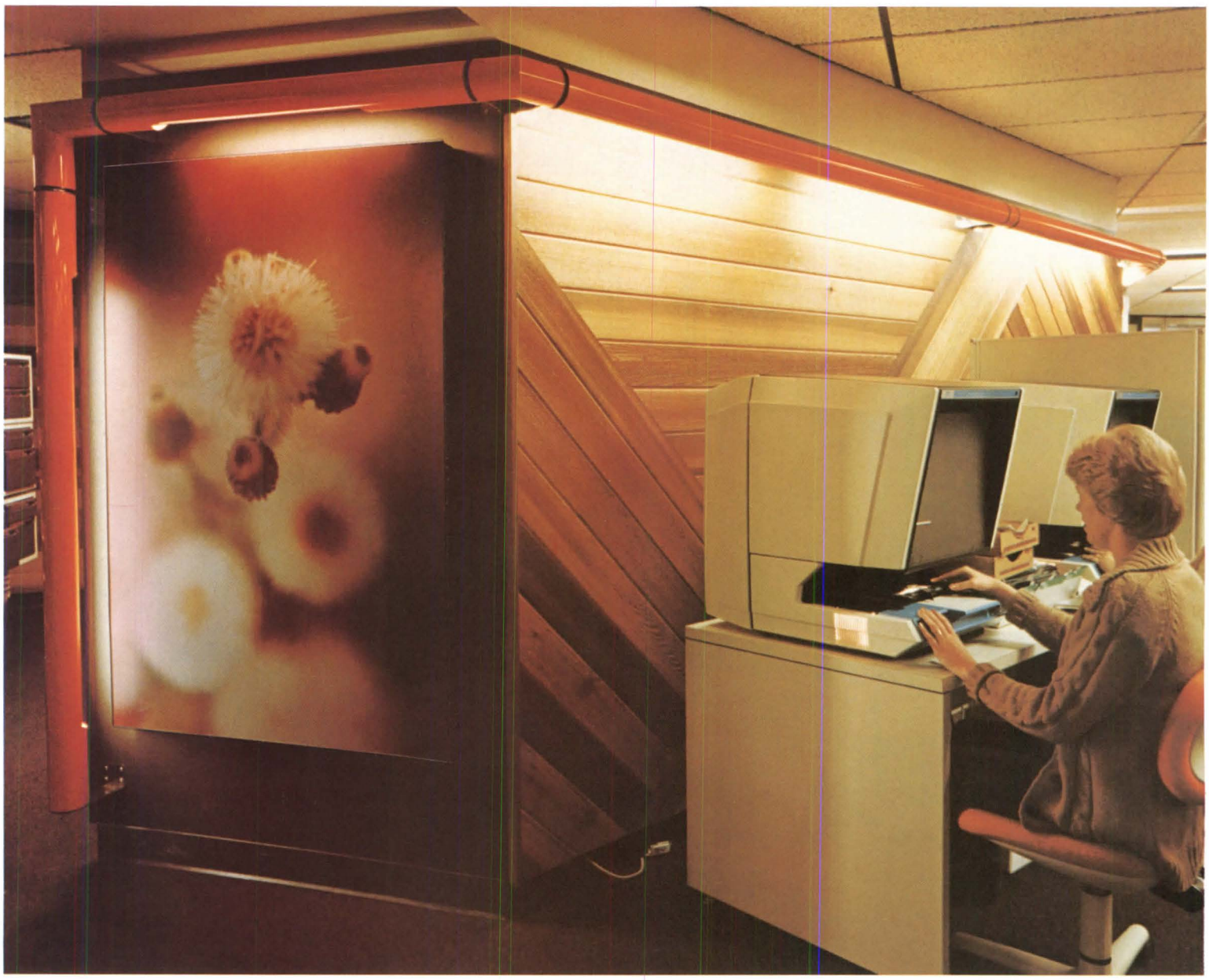

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Practice

Environment Problems Still Draw Strong, Broad Public Support

Public opinion polls in the late 1960s revealed a growing concern about environmental problems, the intensity peaking in April 1970 with "Earth Day," when thousands of people nationwide participated in environmental events. As a result, the 1970s came to be called "the environmental decade." But in the latter years of the decade, some saw signs of a backlash against environmental concerns, with such problems as inflation and national defense now considered by the public to be more urgent.

Still, a new study of U.S. public opinion, called "one of the most extensive and probing surveys on environmental issues to date," shows that a strong majority of the public (62 percent) is supportive of the environmental movement and that a plurality (42 percent) believes that "continuing improvement must be made *regardless* of cost." The abiding concern for environmental issues is "not limited to the affluent, the well educated or the young," but cuts across all demographic categories.

The survey, commissioned by the Council on Environmental Quality, the Environmental Protection Agency and the Departments of Agriculture and Energy and conducted by Resources for the Future, a nonprofit research organization, included interviews in early 1980 with 1,576 adults representing a cross section of the American public. Robert Cameron Mitchell, a sociologist with RFF, designed the survey and analyzed its data, as well as making a comparison of the survey results with earlier polls in order to identify trends in public opinion.

"To make the RFF survey as realistic a test of public opinion as possible, the poll included a number of questions with difficult tradeoffs," according to the report *Public Opinion on Environmental Issues: Results of a National Public Opinion Survey*. An example was the statement: "An endangered species must be protected, even at the expense of commercial activity."

Moreover, respondents were required to compare the environment with a wide range of social concerns. One of the first polls to include a question about the environment was conducted by George Gallup in 1965. He asked respondents to rank three out of 10 national problems on which the government "should devote most of its attention in the next year or two." "Improving public education" ranked highest, chosen by 45 percent; "reducing pollution of air and water," selected by 17 percent, ranked ninth. When Gallup repeated the question in 1970, respondents choosing pollution had tripled, placing this concern in second place, ranked below the reduction of crime. In the 1980 RFF survey, reduction of crime (61 percent) still ranked highest, with unemployment in second place (48 percent) and pollution in sixth place (24 percent).

In terms of urgency regarding 12 broad national goals, the RFF poll found that "making sure that this country has strong defense forces" and "fighting rising prices" each received one-quarter of the votes; no other issue, including fighting crime and environmental protection, was "most important" to more than 11 percent of those polled.

"One of the consequences of the rise of environmental awareness," the report says, "has been a reconsideration of economic growth. Prior to the 1970s, growth was widely regarded as the driving force behind increased prosperity and an ever increasing standard of living." Although most people still regard growth favorably, there is increasing recognition "that rapid growth may entail environmental costs. The polls now indicate that, forced to make a choice, a strong majority of people will choose environmental quality over growth." When RFF gave the respondents three options on a tradeoff between growth and the environment, only one in five selected the statement "we must relax environmental standards in order to achieve economic growth."

RFF's analysis of other polls asking environmental tradeoff questions in the late 1970s found that "a plurality chose energy" over protection of the environment. For example, a September 1979 poll showed that 47 percent of the public thought that "building a needed refinery or pipeline" was more important than protecting the environment. In the 1980 RFF poll, however, they chose the environmentally "benign" solar energy when asked to look ahead to the year 2000 and to select from seven energy sources two or three on which "we should concentrate most." Solar energy was chosen by 61 percent. After solar energy, the use of coal was ranked highest (36 percent), followed closely by energy conservation (35 percent), with nuclear energy preferred least (23 percent).

Among the other findings:

- Although the RFF survey prefaced a warning to a statement that the screening of chemicals is costly and could keep potentially useful chemicals off the market, 83 percent of the respondents said that all chemicals should be screened before use.
- Seventy-three percent said that "an endangered species must be protected, even at the expense of commercial activity"; 65 percent said that marshes and swamps should be preserved in their natural state rather than being drained for development.
- The RFF poll shows that levels of concern about the same environmental issues are fairly evenly distributed, crossing categories of sex, race, age, income, edu-

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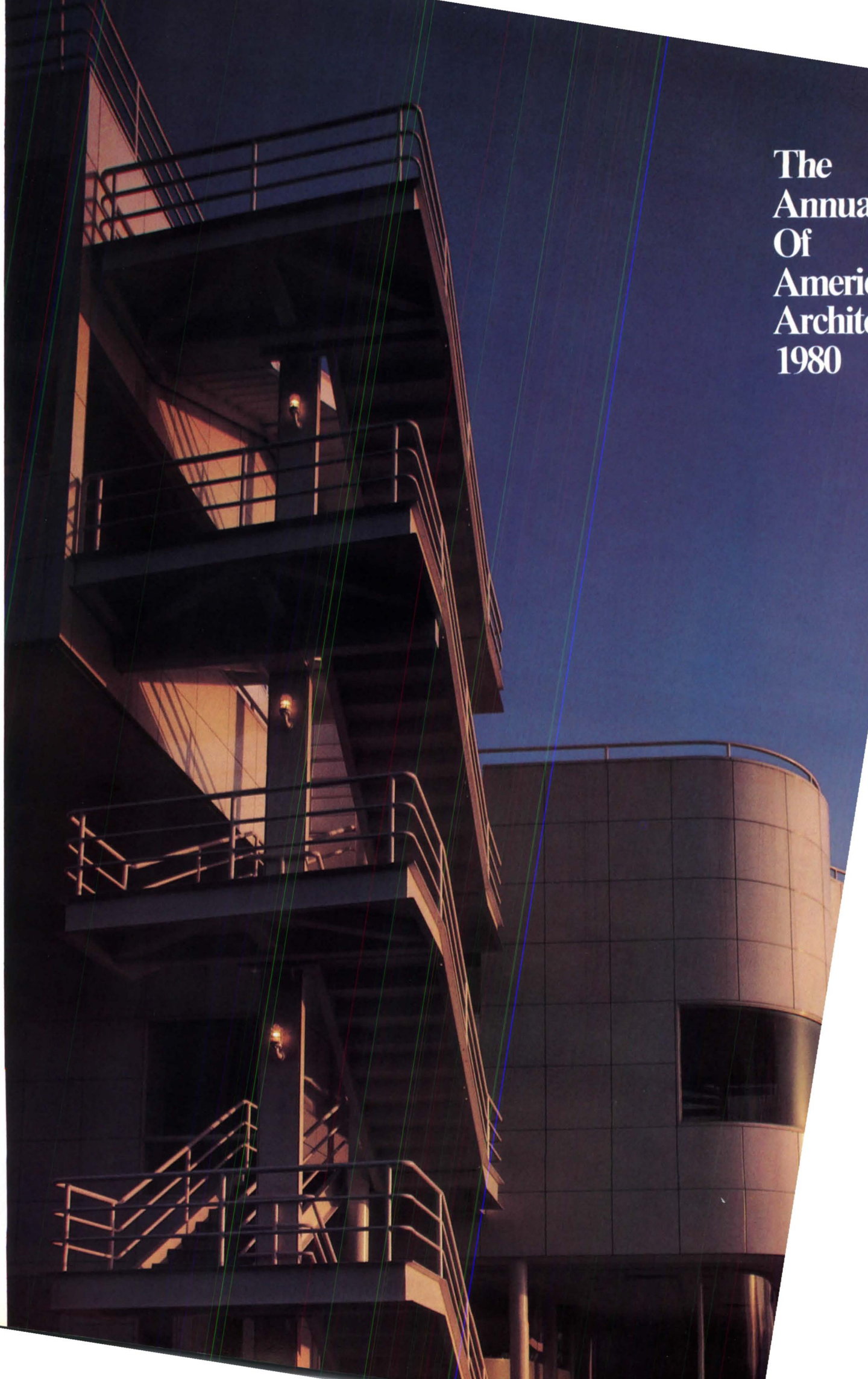

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Practice *from page 7*
cation and rural-urban. There are major exceptions, however. For example, two out of three blacks are concerned a "great deal" about the purity of drinking water, compared with one in three whites; people who live in rural areas are less concerned about the purity of drinking water than those who live in cities of 250,000 or more; people between 55 and 65 years of age are "particularly concerned about the disposal of chemical wastes"; those between 18 and 34 are "more concerned about air pollution than [their] elders."

• According to all available evidence, public support for the environmental movement "has remained strong over the decade." In 1978, 6 percent of the public said they were unsympathetic to the movement; in 1980, 4 percent made this statement. "There is no sign of the backlash which had been predicted once the costs of significant environmental protection became known."

The report may be obtained (send a self-addressed mailing label) from: Council on Environmental Quality, 722 Jackson Place N.W., Washington, D.C. 20006.

Engineering Education 'Crisis' Laid Mostly to Teacher Shortage

A report by the American Association of Engineering Societies, representing 40 professional engineering groups, and the American Society of Engineering Education says that "engineering education in the U.S. is in crisis. It is starting to suffer a decline in quality, at a time when the need for highly qualified engineers is critical." The report blames the situation on the shortage of qualified teachers, obsolete facilities and the small number of advanced degrees awarded despite a burgeoning enrollment of undergraduates.

The most critical factor in the decline of quality is the shortage of teachers, the report says. There are about 25,000 engineering teaching positions in the country, but about 2,000 of them are not filled. The report suggests that this lack of faculty is due to typical salaries which "can be as little as two-thirds of those engineers in industry." It recommends that priority be given to the recruitment and development of faculty, suggesting that 2,000 two-year fellowships of $10,000 each per year be established by the federal government and that salaries for professors be made competitive with salaries in industry. The fellowships, according to the report, would provide graduate assistance to faculty and candidates for future faculty positions.

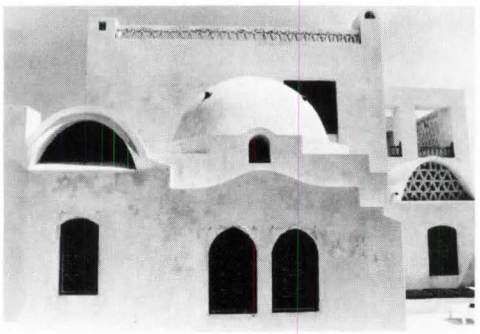
A survey of engineering schools shows that for the fifth consecutive year degrees awarded at the bachelor's level have risen —by 12 percent in 1980 over 1979. In 1980, the number of Ph.D. degrees dropped slightly to 2,751 from 2,815. However, more than 35 percent of the 1980 Ph.D. degrees went to non-U.S. citizens "who cannot be counted as a resource of the U.S. because, by law, they must return home after completing their studies." Hence, AAES recommends that the proposed fellowships be restricted to citizens of this country.

The report says that undergraduate enrollment is now at 340,000 students, and the 1979 freshman class of more than 100,000 "exceeds the system's capacity to educate effectively." The report finds that teaching equipment for such growth technologies as microelectronics and robotics "is almost nonexistent."

Architect Fathy, 15 Projects Receive First Aga Khan Awards

The first Aga Khan award for architecture has been presented to 15 projects that preserve "traditional Islamic character and identity" while serving contemporary needs. The winners share a $500,000 prize fund donated by the Aga Khan, leader of the Ismaili Muslim religious sect.

In addition, Egyptian architect Hassan Fathy, Hon. FAIA, received a $100,000 award for "his lifetime achievement in



creating architecture for Muslims backed by social commitment and for reappraising the relationship of spiritual designs with building forms" (see p. 38).

The award was given to a wide range of projects—contemporary buildings, restored buildings and villages and buildings whose social benefits are more dramatic than the visual design.

For example, a municipal project in Jakarta, Indonesia, that improved the access roads, water, sewage, drainage canals, hospitals and schools for 500,000 people living in an urban squatter settlement was honored. Also cited for its social benefits was a rural coeducational religious boarding school and institution for community development in central Java, Indonesia.

The Mughal Hotel in Agra, India, was honored for its consistency with historical context. The project revived the local brick-making industry and employed local manufacturers and craftsmen. Also cited in this category were the Turkish Historical Society center, Ankara, Turkey, a modern structure with an atrium design reminiscent of ancient Turkish fortresses, and the Ertegun house in Bodrum, Turkey, a 100-year-old summer house overlooking the Mediterranean.

The 13th century village of Sidi Bou Said, Tunis, Tunisia, was honored for its preservation of traditional architecture. Awarded for restoration were a 16th century caravan stop that has been converted from ruins into a hotel in Edirne, Turkey; a restored 16th century urban center in Isfahan, Iran, and the restored 19th century national museum in Doha, Qatar.

The medical center in Mopti, Mali, a mud-straw structure, was awarded for "bringing vital health services to an entire region without imposing alien forms or values." A two-story summer house in Agamy, Egypt, was honored for its use of Egyptian archetypes, alcoves, belvederes, windcatches, vaults and domes (photo below). Seventeen middle-income row houses in Agadir, Morocco, were honored for "responding to the Moroccan life style and for maximizing privacy in the restricted space of 5,200 square meters."

Awarded for innovation was the cluster of 31 mushroom-shaped water towers in Kuwait City, Kuwait, whose small gardens at the base of each cluster are symbolic of an oasis. Also honored for its innovation is the Islamic conference center and hotel in Mecca, Saudi Arabia, which consists of three buildings arranged around courtyards. A 1,400-seat auditorium is covered by an aluminum suspension structure, suggestive of a desert dweller's tent. An agricultural training center, Nianing, Senegal, a prototype structure developed by Unesco was honored for its "appropriate building systems."

Financial Survey Sees Architects Surpassing Engineers in Profits

A recent financial statistics survey of professional service firms, made by Birnberg & Associates of Chicago for the Professional Services Management Association, updates a survey made by the firm in 1978. Unlike the figures in the 1978 survey, those in 1980 show that architects had a higher level of profit (9.1 percent mean) than engineers (6.5 percent mean). For all respondents, pretax profit of net revenues (total revenues less consultants, reimbursables and other nonlabor project expenses) declined from 6.8 percent in 1978 to 6.1 percent in 1980.

A total of 465 firms was surveyed,

continued on page 13

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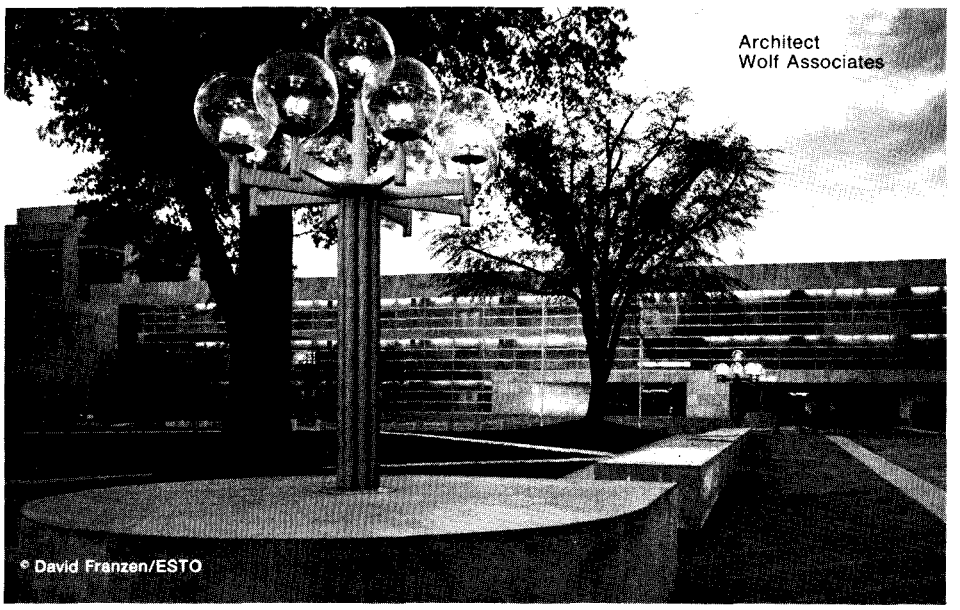

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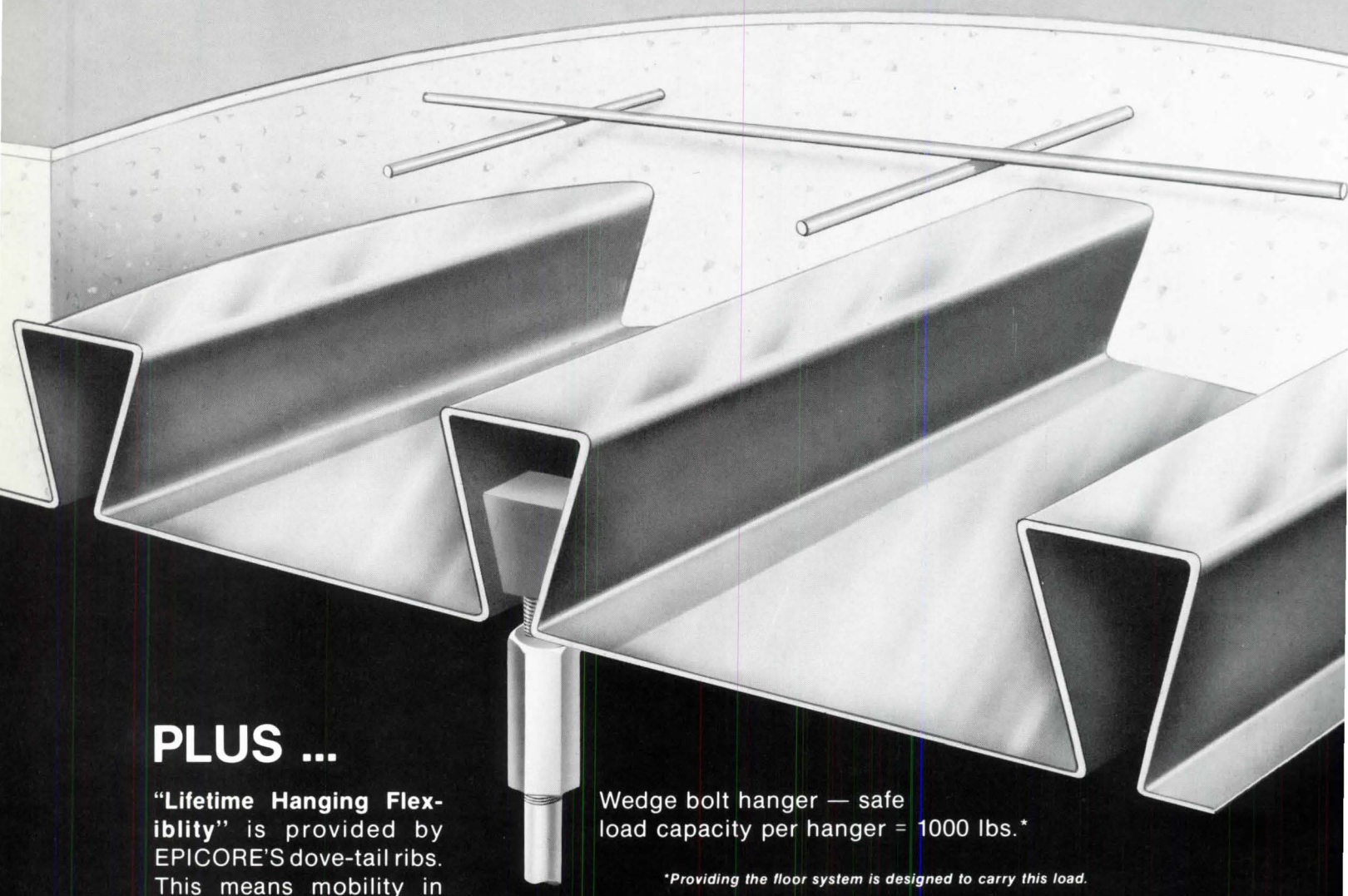

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Practice *from page 10*
with 61 percent returning completed questionnaires. Thirty percent were primarily architectural firms, and 48 percent primarily engineering firms. The median size was 67 people.

Among the other findings:

- Firms which performed most of their work for government agencies had a lower profit level (6.2 percent mean vs. 8.4 percent mean for private work), a higher overhead rate (152 percent vs. 146 percent) and a longer collection period (69 days vs. 65 days).
- Net revenue per total employee rose in 1980 from $28,515 to $33,030, but the overhead rate increased from 133 percent (of direct labor) to 145 percent.
- Firms in the sunbelt enjoyed higher profits (9.1 percent mean) than those in the Northeast (4.0 percent mean).

The 60-page report, which gives statistical information on 30 measures of financial performance in professional service firms, is available for $40 ($10 to PSMA members and active subscribers to the *Professional Services Management Journal).* Send check made out to PSMJ to PSMJ/PSMA Financial Survey, Box 11316, Newington, Conn. 06111.

'Windmill Farm' Would Generate Power for Southern California

A privately financed firm in San Francisco has submitted a proposal to the Bureau of Land Management to erect a "windmill farm" in the San Gorgonia Pass area of southern California. It would require the use of 2,000 acres of federal lands on the upper northern slopes of the pass.

The windmill farm would be constructed in four stages with 20 windmills completed by 1985 in the first stage, each generating four megawatts of power. Similar construction would occur with the same production capacity for a total of 320 megawatts by 1990.

Each windmill would consist of a 200-foot tower, with a 300-foot blade on a horizontal axis. Each tower, on a one-acre site, would be spaced 3,000 feet from another tower. Transmission lines for all the windmills would merge into a grid leading to a substation of the Southern California Edison Co. to complement power sources.

Right-of-way grants would be required from the Interior Department for concrete pad siting areas for each windmill, for access roads and for the overhead transmission system. The bureau is studying the proposal of Windfarms, Ltd., and has already begun environmental studies on the proposal which would supply local utilities in 1990 with electrical power the equivalent to the energy available from one million barrels of oil.

Meanwhile, Interior's Water and Power Resources Service is continuing its windfarm study at Medicine Bow, Wyo., where a four megawatt generator is being constructed to produce sufficient energy to meet the needs of about 1,200 families. The first of possibly 50 large wind machines will have a two-bladed, Fiberglas rotor totaling 255 feet in length. The blades will be mounted on a hollow steel tower 262 feet tall. The aim of the project is to "explore the feasibility of blending utility-sized wind turbine generators with large hydroelectric power generation and distribution systems," says Interior. Power generated by the machines will be fed directly into existing transmission lines to hydroelectric dams.

Reduced Barriers for Disabled Linked to New Firesafety Needs

"Recent progress in making facilities available to the handicapped and in deinstitutionalization of the more severely handicapped has increased the need for greater efforts to ensure the safety of the handicapped in fire and other emergencies," says the recently issued report "Fire and Life Safety for the Handicapped."

The report, prepared by the AIA Research Corporation and the National Bureau of Standards' center for fire research under the editorship of B. M. Levin, contains the conclusions of the first national conference to give concentrated attention to the safety of the disabled in fire and other emergencies. The basic premise of the conference was that all persons have an equal right to life safety in a fire emergency. It was recognized that there is no single solution to the protection of the handicapped and that an "interactive approach" is required that involves the relationships among the building, its management, the people in the building, various institutions such as government and codes and standards bodies, and fire departments and rescue services.

Among the conclusions was that in fire emergencies people tend to use egress routes with which they are familiar and that building design and management plans "should work to use fire-safe egress routes as a matter of course. Daily stair usage has been found to increase significantly, for instance, when stairwells are well-lit and attractively decorated." Also, if people cannot be moved to a safe environment by use of an egress pattern or areas of refuge, additional measures must be incorporated in the building design, such as the compartmentalization of floors into safety areas.

The report says that fire department personnel should become involved in the design of new buildings and the retrofit of old ones. Further, preplanning "helps to remove the element of surprise in combatting a burning building." Even in a well-designed building, "there is a fatal flaw" in every fire situation. Often the flaws are exaggerated by the incompatibility of a building's firefighting force, but the incompatibilities can be minimized by preplanning. "Where good design and good plans exist, chances for survival are greatly enhanced." For fire strategies to be realized in operation, there should be improved communications among building designers, managers and owners of structures from the time of building inception.

Participants in a workshop on building design found that a basic problem for designers is the tendency to put all handicapped individuals into a single consideration in programming the building. But to lump all the handicapped together is "an exercise in futility," since "the needs of the wheelchair patient are different from those of the deaf, the blind, the aged, the infant, the restrained and the inebriated." There is a need to identify two categories of people who need protection in an emergency: those who need a place of refuge within the building envelope and those who require extended time for evacuation.

Special instructions on how to use a building in an emergency are needed by some handicapped people, the participants in the workshop said, and these instructions "must be tuned to the specific design and construction of the building and the ways in which it will operate under fire conditions." They concluded that "the ultimate goal is to broaden designers' understanding of user needs for buildings. . . . Ideally, design for the handicapped should simply be better design for everyone—a total design which is a meshing of the needs of the handicapped with all other needs and the building program in order to come up with a design that satisfies, both functionally and esthetically."

The report may be ordered for $5 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Its order number is NBS Special Publication 585.

New Wood Design Awards

The American Wood Council, headquartered in Washington, D.C., has announced that it will conduct a national and regional design awards program for nonresidential wood buildings in 1981. National winners are to be selected from among projects receiving honors in judging for the Western, Southern, North Central and Eastern regions of the country.

Awards will be given biennially to individual buildings and complexes in four categories: commercial, institutional, industrial and the renovation of older build-

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Practice *from page 13*
ings. Charles W. Moore, FAIA, of Los Angeles is the professional adviser for the overall program.

Entries for the Western and Southern regions are due no later than Jan. 1, 1981; judging of entries from the North Central and Eastern regions is planned for the fall of 1981. Entry forms and information are available from the council, 1619 Massachusetts Ave. N.W., Suite 500, Washington, D.C. 20036, (202) 265-7766.

Jurors for the Western region in the first year's awards program are Matthew R. Mills, AIA, San Francisco; O. L. Mithun, FAIA, Bellevue, Wash., and Claude Stoller, FAIA, Berkeley, Calif. On the Southern jury are Warren Cox, FAIA, Washington, D.C.; Boone Powell, AIA, San Antonio, Tex., and Philip A. Shive, AIA, Charlotte, N.C. Jurors for the North Central and Eastern regions will be announced early next year.

Government

Computer Capability Inquiry Sought in A/E Procurement

The General Accounting Office has recommended to Congress that computer capabilities be considered and evaluated when A/Es are selected for projects on which computer-aided design methods can be used, such as energy analyses, and that the criteria used in evaluating "the overall qualifications of firms for design contracts include computer capability and expertise." It also recommends that the use of computers be discussed and evaluated when negotiating A/E design contracts and during the selection process.

GAO further recommends that heads of federal government departments and agencies "direct that computer use be required for those analyses and design functions which can be done more efficiently and accurately by computer-aided methods and which are critical to the end product in terms of safety, energy consumption and life cycle costs," and also that the use of computers be encouraged "in all areas when the quality of design or the structure to be built can be improved when computer aids are used."

The report also recommends that the Office of Federal Procurement Policy, in concurrence with the Office of Management and Budget, "promulgate" an A/E procurement policy in which fee negotiations are based on proposals that "clearly identify tasks which will be performed by firms providing architect-engineer services, and, when applicable, indicate how computers will be used on the project." It recommends as well that preprinted fee proposal forms be revised to include a "structured task-oriented fee proposal format."

GAO based its recommendations on a survey of 745 A/E firms and 11 federal agencies, concluding that federal officials and agency procedures and practices "often limit and/or hamper the use of computers on federal projects." Agencies have "generally ignored the evolution of the computer as a major design tool" in negotiations with A/Es. Fee proposal forms have not recognized the possible use of computers, providing no place for computer service costs. An exception is the State Department which, since 1979, has incorporated "computer applications" as a supplemental service on its procurement form, based on an AIA document.

GAO contends that federal agency personnel "rarely" discuss the planned use of computers during contract negotiations, and even during the A/E selection process most agencies "ignore computer capability." GAO says the A/E firms often cite the cost of computer services as the problem. "Firms feel a lack of understanding on the part of contract negotiators as to the complexity and cost of computer services" contributes to their "neutral attitude" about computer-aided design methods. "We were told," says GAO, "that some contract negotiators rejected all computer costs classified as direct costs, and that auditors have been inconsistent in their decisions regarding the proper classification of these costs." While GAO says that it recognizes that the use of computers by A/Es is sometimes limited by such matters as budgetary restraints, there are situations "where a little more design money for computers will result in lower construction costs, lower future operating costs, or both."

GAO contends that greater use of computer technology would improve the performance of A/Es, reduce construction and operating costs and enable A/Es to make more design choices quickly and accurately.

In order to achieve these benefits on federal projects and to create an environment "conducive to computer use," GAO recommends also that federal employees responsible for procuring A/E services be provided with technical training on computer use and that the employees be encouraged "to stay current on new and improved uses of computers in their individual areas of expertise." It also recommends that technical support be provided contract negotiating teams and that the planned use of computers be "routinely" discussed and evaluated in the negotiation of design contracts.

Among the agencies to express opposition to some of the GAO recommendations was GSA, which was fearful that the encouragement of computer use would cause accusations of closing out minority and small firms. GAO found in its survey, however, that two-thirds of the minority firms and 76 percent of small business firms have computer capability or access to it.

GSA also contended that the extent of computer use should be a management decision "based on carefully structured cost benefit analysis." This implies, says GAO, that cost effectiveness "is measured only in terms of reduced design costs. We believe that cost effectiveness should be measured in terms of potential for reduced construction costs, lower energy consumption, lower life cycle costs or other benefits, such as a more functional, barrier-free design."

The Postal Service and the Office of Management and Budget said that the A/E should decide on what tools to use. "Perhaps the government should only require that analyses be performed and not specify how they are accomplished, unless the method is critical to the end product," said OMB's administrator. The administrator of the Veterans Administration said that the requirement of computer use "can be very judgmental." GAO itself says that "because a firm has a computer does not mean that it can be used effectively or efficiently. A computer cannot be substituted for judgment." Hence, computer expertise "should be evaluated during the selection process."

Small Firms Get a Break In GSA Procurement Policy

GSA has modified its procurement regulations to promote opportunities for small A/E firms. The changes, made at the request of the commissioner of public building services, include a statement which says that all A/E contracts for construction projects "with an estimated construction amount not exceeding $2.5 million shall be set aside for small business." Determinations not to be set aside will come only when the contracting officer determines that it is "not feasible."

Of the architectural firms registered with GSA, 85 to 95 percent are con-

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AIA JOURNAL

Issues, Crises and Fads

One of the nation's less salutary habits is to treat significant public issues as fads. Thus, issues become causes, often are labeled crises, get a great deal of political and media attention, then subside to obscurity. So it was with the urban crisis that gripped national attention in the 1960s, then dimmed as quickly as the flames of civil disorder in the slums and ghettos.

The decline of this particular crisis was instructive. It involved, first, the surcease of an immediate threat to civic order; then a widening of perception of the cost of remedying the social ills that caused the crisis; then a denial by political leaders that there ever had been a crisis—"and if there had been, friends of the majority, it certainly wasn't your fault." This denial was buttressed by a raft of academic analyses (funded by these same political figures) which also attempted to discredit the effectiveness of the most widely espoused remedies. Meanwhile, the nation's attention had turned to other crises, notably the war and the environment.

The environmental crisis started off the 1970s with a rush. Then, as the decade went on, it too ran into rough going. It too had costs attached to remedies, and these costs were emphasized, if not magnified, by public figures and the press as the economy faltered. Fingers were pointed at "environmental extremists" whose fanaticism was draining the nation of both dollars and jobs. Often those doing the pointing were economic interests being pinched in the profits for such extravagances as clean air.

But some old crises refuse to die. Earlier this year, the particularly vicious civil disorders in Miami provided a reminder that conditions in the slums and ghettos remained critical for those who lived there. Editorial writers dusted off their copies of the Kerner report.

And now it turns out that a good many Americans think that environmental protection is more than just a faded fad. A new poll (page 7) indicates that there is persistent and widespread concern about the quality of the surroundings of our lives. *D.C.*

Evaluation: Boston's John Hancock Tower in Context

Its performance as a building and its ubiquitous presence in the cityscape. By Robert Campbell

Every semester I poll my students at Harvard on their best liked and least liked buildings in Boston. These are people interested in architecture but they are not architects nor architectural students. Consistently over the years, the John Hancock Life Insurance Tower has finished first as "best liked" and second as "least liked."

This suggests that there isn't any simple answer about the Hancock. Of all Boston's buildings, it probably is now the most prominent in people's consciousness of the city—no small achievement in the town of Kallmann, McKinnell & Knowles' city hall, Richardson's Trinity Church, McKim's public library, Bulfinch's statehouse. Perhaps it isn't quite the right achievement, though, for a building that was intended to be, so far as possible, mere background to its neighbor Trinity Church and Copley Square. If so, that's just another paradox in a building that's full of them. Architects and laymen alike love the Hancock and hate it.

The Boston Society of Architects/AIA tried to stop the building before it was begun. The national AIA design committee stepped in to defend it, only to be suppressed. Edward Logue, Hon. AIA, tsar at the time of Boston's renewal, loved an earlier abandoned Hancock design but called the present one "an outrage." Energy specialists profess themselves appalled by the

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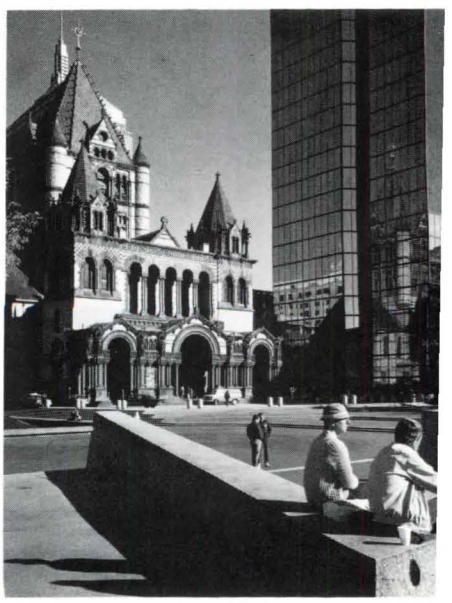
Mr. Campbell is a practicing architect in Cambridge, Mass., and architectural critic of the *Boston Globe*.



Photographs by Steve Rosenthal

building. John Burchard, former dean of the Massachusetts Institute of Technology school of architecture and planning, called it "a monster." For author Charles Jencks, it's "a late-modern masterpiece." AIA gave it an honor award.

I. M. Pei & Partners' first design in 1966 was quite the opposite in concept of the Hancock as built. This very handsome project featured a cylindrical tower of about 60 stories, with one face chamfered flat. The tower was concrete, of closely spaced columns and narrow windows between them. The chamfer was glass, a dark stripe facing northeast. Lower building elements bracketed the tower on both sides to fill a site double the size of the one now used, creating a trapezoidal plaza focused on Trinity.

The first scheme was a collaboration among Pei, Henry Cobb, FAIA, and others in the Pei firm. It was privately presented to the client and city and was well received. But there ensued a long hiatus of nearly a year, during which Hancock refined its program—until then very loose—and hired a development consultant. The company came back to Pei with a new program: Instead of 1.5 million square feet on four acres, they wanted something like two million gross on less than two acres, the present site. Where tower floors had been about 22,000 square feet, now they were to be nearer 30,000.

After some concern about whether to do the job at all, Pei's team split up. An office tower in Toronto had just come into the office. Pei took that and Cobb took Boston. With the new, far bulkier program, Cobb decided on his "background building" and the new design emerged quickly.

The biggest issue at the Hancock is context—social and physical context. For many Bostonians, the huge blue mirror over 19th century Copley Square is a gate-crashing refugee from a glitter party that has, somehow, gained entrée to one of those genteel afternoon tea concerts at which proper Bostonians wear what Cleveland Amory called "their perfectly good dresses." The Hancock is viewed with a mixture of curiosity and alarm.

No one is more alert to its paradoxes than the architect, and no one states them better. Cobb, a founding partner of the Pei firm and now also chairman of the department of architecture at Harvard, designed the tower as built in an intensive charrette in September 1967. Thirteen years later, Cobb sees the issue this

A 'flagpole' visible from across the state line.

way: "The strength of the building as well as its limitation is the fact that it is so single-minded. It's impoverished because of its single-mindedness, but that gives it its drama. It dramatizes the predicament of this enormous thing happening in that place. And I find that, for me, dramatizing the predicament is perhaps as legitimate a role for architecture as solving the problem."

Cobb explains what he means by predicament. "It's the predicament of society at that moment—the relation between the individual, the institution and the community. You can see in that building a certain hierarchy of values represented. Obviously, at the top of the hierarchy is the acknowledgment that a major corporation is entitled to give itself space to grow in the heart of the city. However, just barely beneath that, in the hierarchy, is that having obtained that right, there is the obligation to take a contextual approach."

The right to build "an enormous thing in that place." And the need to do it with "the contextual approach." Those are the poles of the argument about the Hancock. It's an argument primarily about urban form, not use, function, energy or technology, no matter how important those things are.

In the past, of course, the Hancock made news for rather special reasons. First, there was a struggle to get it approved. Then excavation for the building disturbed water tables and earth pressures around it. Trinity Church and the Copley Plaza Hotel, both built on wood piles in filled land, suffered damage, as did utility lines. (Hancock bought the hotel and generally has settled the other claims.) Then came the horrendous saga of technical problems involving the glazing, culminating in the removal and replacement of the building's 10,334 lights of mirror glass, each one 4.5x11.5 feet and weighing 500 pounds. But the building did get built, and it's now in its fifth year of occupancy, time enough to permit a look past the controversies to what finally emerged.

Your first sight of the Hancock comes from a long way away. At this regional scale, it's Boston's flagpole, a signal tower to the surrounding world. Its 790-foot height above grade makes it the tallest structure in New England. On a clear day, you can see it from New Hampshire in the north and from Worcester in the west. What the church steeple is to the New England village, the Hancock is to the Boston metropolitan area. It signals presence, magnetizes space.

In early views of Boston, the hierarchy was always clear. The statehouse dome atop Beacon Hill dominated and gathered the city like a brood hen. Next below came the clusters of church steeples, then the lower huddles of houses and commerce, finally the wharves and the water. The growth of recent years has thrown all of this out of scale. The Hancock can't restore, of course, a meaningful visual hierarchy to the city, but it does restore some of the focus. It and the Prudential Tower nearby are a twin semaphore that helps you judge your direction and distance from the center. The many Boston neighborhoods that were visually isolated now have this common landmark reference.

The Prudential and the Hancock are expressing an urban design concept called the "high spine," an idea from "The Architects' Plan for Boston" sponsored by the Boston Society of Architects/AIA in the early 1960s. The notion was that growth in Boston would happen without harm if it developed along the seam of the city, a no-man's-land along the old turnpike and railroad rights-of-way, today largely occupied by the Massachusetts Turnpike. Such a spine of taller buildings, which would fall along the center line of the first Boston, the tiny Shawmut peninsula, would organize the city visually. Today, there are plans for a new subway line along the spine, a highrise cluster between the Hancock and the Prudential and an office tower at the downtown end. The high spine concept seems to be working.

Thus the Hancock Tower works well and in harmony with broader ideas at this largest scale. As you approach it more closely, coming into the middle distance, it gets even better.

From Cambridge you see the narrow end of the tower's rhomboid shape, split top to bottom by the famous notch that transforms the building into two glittering blades. From here it's clear that the building was designed by a series of removals, not creations. First, mass disappears in favor of pure, weightless volume. From many views even much of the volume goes: The Hancock is only surface, a 63-story mirror balanced on edge.

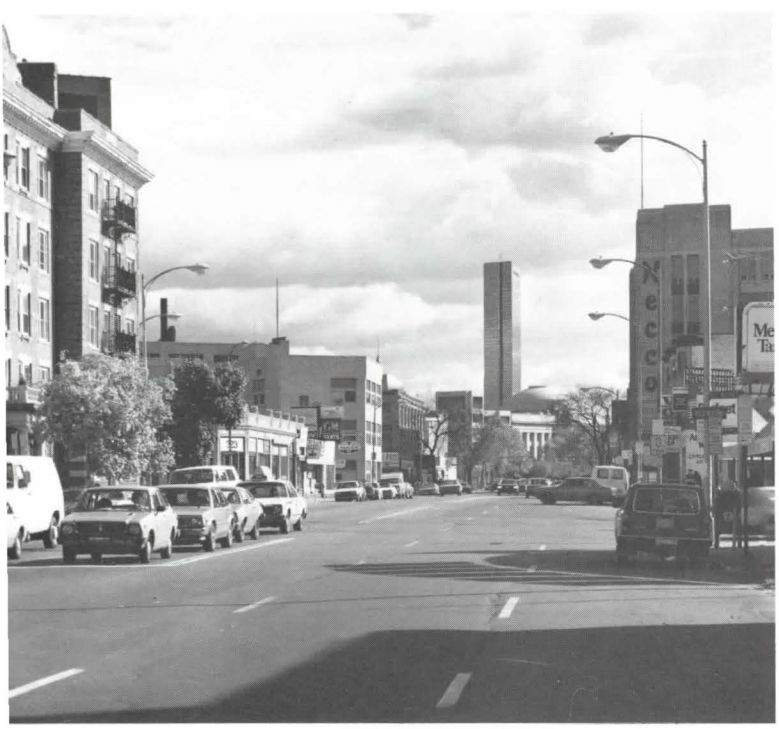
The sculptural effects are breathtaking. From the west up Boylston Street, you misread the acute angle at the top as a normal right angle; the building seems impossibly tall. Surfaces change with every whim of light and weather. Seen from across the Charles River, the red ball of the setting sun is caught between the twin blades. Seen broadside, the facade becomes a scrim that transmits or reflects, depending on how it's lit. When opaque, it offers two further possibilities: simply reflective, a gridded mirror, or a watery surface of modulating tones. In this light, it recalls John Ruskin's description of his favorite building, Giotto's campanile in Florence: "That bright smooth surface of glowing jasper, that serene height of mountain alabaster, colored like a morning cloud, and chased like a sea shell." Even its critics concede the overwhelming beauty of the Hancock as an object seen from a certain distance.

Next to its beauty, what strikes you about the Hancock is its arctic silence. It tells you nothing. That other most remarkable Boston building of its period, Boston City Hall, virtually turns itself inside out, literally spills its guts to tell you all: its structure, its materials, its organization, its contents. City hall can't really be said to have a surface at all. In contrast, the Hancock is all skin, all silence. The mirror module is the building: At roof, at ground, at mechanical floor, observatory, executive floor, there is no change of expression. There is no base, shaft or cornice, no head in the air, no foot on the ground. Nothing penetrates the surface, nothing emerges from it.

Where the great mirror meets the ground, a thin slot of metal wraps it like a microscopic moat, so that the tower seems to have slipped up "from below," in Cobb's term. It doesn't even rest on the plaza but slides weightlessly, silently through it, spiritual in its refusal to touch. The only special conditions in the whole building are the entrance canopies; one mechanical louver near the top; the notches; antennae and a window-cleaning trolley at

Hancock from the Massachusetts Turnpike (below), from Back Bay (right) and Massachusetts Avenue in Cambridge.

Photographs by Steve Rosenthal



the roof, and the so-called "bustle," those lowest eight floors in which the building expands to fill three of its four street frontages, holding street walls and picking up the cornice line of the adjacent Copley Plaza Hotel.

The tower above angles away from the local street grid but the bustle fills it out down below. The angling does several things. It creates an entrance plaza that opens up toward Trinity Church. It presents the narrowest facade of the tower to Copley Square. And it aligns the long facades of the tower to major streets a few blocks away, a device intended to make the tower a formal pivot between two parts of the city.

Henry Cobb has used a slide lecture for years to explain his building's strange shape. His key term is "contingent," referring to buildings shaped by context. The Flatiron in New York City is another example. In contrast are "autonomous" buildings like Eero Saarinen's CBS in New York City: The form is self-generated, a prototype that could be sited anywhere. Especially in Boston, a city of particular street patterns, Cobb's distinction makes apparent sense.

Cobb says: "Our concern for the relationship to the church and Copley Square pre-empted all other issues. It seems to me that everything about the building betrays the fact that we were terribly concerned with the surroundings."

Like any other office highrise, the Hancock has a plan largely governed by the need for elevators, rentable floor space and so

A photogenic lobby, a 'primitive' office landscape.

on. What makes it different is the skewing of the end walls to produce the notched rhomboid plan instead of a rectangle. This can't be explained by internal needs. Cobb again: "We positioned and shaped the tower to make the church the autonomous center and the tower the contingent satellite. The triangular plaza the shape of the building creates between the church and the tower focuses the attention on the apse end of Trinity, the view Richardson always drew it from."

And finally: "The tower's uniformly gridded and reflective surface, stripped of all elements that might suggest a third dimension, mutes the obtrusiveness of its enormous bulk, and defers in all respects to the rich sculptural qualities of its much smaller neighbor."

Whether or not you buy all that, there's no doubt of one thing. The tower does appear to be taking up some kind of stance, striking an attitude, making some unexplained gesture instead of simply filling its air space. This is absolutely crucial to its appeal.

For better or worse, the "contingency" is all on the Copley Square side of the building, the side where the other architectural monuments are. Asked about the tower's relation to the South End, the 19th century mixed-income neighborhood to its south, Cobb said: "If it has a good relation, it's accidental; if it has a bad relation, it's accidental. It was not part of the intent."

A special factor in the Hancock's image is the neighboring tower. In the 18th century, beauties were advised to travel with homely companions as foils. The tower of the rival Prudential Insurance Co. serves this purpose admirably for the Hancock. This characterless object, surrounded by its progeny of no-neck monster apartment houses, hulks over McKim's public library at the other end of Copley Square from the Hancock. Everything about it is a foil to the Hancock. As opposed to Hancock's silver mirrors, for instance, the Pru is sheathed in a scaleless meshy substance that looks like something you might pull down over your pawn shop to keep out thieves. Where at the Hancock you can walk right up to and touch something 790 feet tall—a pleasure often remarked—at the Pru you aren't even aware of arriving at the building itself after navigating its bodyguard of useless plazas and satellite structures. The fact that the two buildings are both insurance companies and about the same height, much higher than anything else around, gives them a yin-yang, death-lock togetherness in the public consciousness. The Hancock is actually 40 feet taller but the Pru is on higher ground. The need to be taller than the Pru was an unspoken but universally understood part of the Hancock program.

Seen at close range, unfortunately, Hancock's mirror glass panels are overscaled. The charcoal gray granite plaza, facing northeast, is dark much of the year, lacks any detail whatever, and is windy even on dead-calm days. As if in some Nordic fable, you hurry through wind over a dark surface toward a building that in Cobb's own words "does not invite entry." Even its huge lobby is screened from view by the reflective glass.

Of this depressing approach, the architect says: "We never wanted an ornamental plaza. We wanted a surface. Just building, surface, church." Even existing street lights and signs were removed to clear the view toward Trinity. Cobb continues, "The three-story-high lobby is sheathed in the same manner as all the other floors. Had the monumental scale of this space been directly expressed or exposed to view from the outside, it surely would have upset the delicate balance in the dialogue between church and tower."

The entrance presented a particular problem: How do you penetrate a gigantic mirror? The solution was a row of plexiglass bubble canopies, each 19 feet in diameter, which are additions to, rather than violations of, the perfect surface. The domes broke last winter through a combination of fatigue, wind and cold. Cobb has now designed a new entrance canopy, a single continuous skylit shed form that will rest on the round frames of the former bubbles.

"Those domes," he says, "were in a slightly facetious spirit that was at odds with what is a very austere statement, like somebody giggling at a funeral." Ideally, he says, joking wistfully, to enter the tower you should walk down the nave of

Trinity, descend an escalator at the crossing, traverse underground and rise within the tower.

The Hancock lobby is often photographed. It's a three-story high-tech extravaganza of supergraphic arrows and numbers and curving mirror finish railings and columns. Elevators leave from two levels at once, joined by escalators.

One bank of elevators flies to the Hancock's only other public place, the observatory on the 60th floor. This is the highest occupied floor (above is a three-story mechanical space). The observatory's exhibits, including a film and wonderful telescopes aimed at various landmarks, are by Chermayeff & Geismar. Being here is the nearest you can come to feeling at the center of Boston, and most visitors and many residents do come.

As for the rest of the interior, it is rather sealed off. The Hancock may or may not be a contingent building formally, but it certainly is an autonomous one socially. Something like 18 grades of employees can choose to eat, bank, rest and shop where they work. There are three cafeterias, delicately adjusted in rank, which ascend the social scale as they rise in actual height from the basement, to the third floor, to the 59th. One of the arguments made to justify the Hancock originally was that it would keep the workers with their buying power downtown. Some do leave the building, of course, but they don't have to. The Hancock is as self-contained as the ocean liner which it in some ways resembles.

The main cafeteria seats 1,000. Next to it are a credit-union shop and an enormous lounge. Hancock management says that providing the cafeteria saves time: Meals are obviously subsidized. There's a library, too, and though it hasn't opened, there's an underground branch bank for employees in case the one on the street floor should get overcrowded. Perhaps as a result of all this, there is very little new commercial life in the Hancock's immediate neighborhood.

To enter the building is to pass from the public world to the private, and the criteria for success change, of course. For the users the major complaints are bad acoustics and lack of privacy.

Both problems are traceable to the fact that most space is office landscaped in an unsophisticated and visually chaotic system. There are three different heights of screen partitions. Some are curved, some straight. When you figure in the colors, there are 44 variants of screen. Noise travels through and over them and bounces off the hard windows and ceiling. A year ago, the company hired an acoustical consultant, R. Herbert Kring of Ostergaard Associates in New Jersey. Kring recalls: "John Hancock decided early on to do office landscape, but a building was delivered to them which had nothing to do with office landscape. And the system they put in was primitive. The broadcast masking sound was unpleasant and people often wanted to turn it off. The ceiling system was of conventional fissured mineral tile, insufficient in terms of sound reflection. The glass was a major problem. There is no easy way of blocking the horizontal sound reflections off the glass because of the induction unit that runs along it. The screen partitions between work stations had no internal sound barriers—sound went right through them. The combination of all this made pretty poor privacy."

Currently, experiments are under way to control some of the problems, including sound baffles attached to mullions, rearranging screens to control sound by distance and orientation, retuning the masking sound, adding sound absorbent material here and there and replacing the screens with others that are less sound-transmissive.

The architect had nothing to do with the choice of office landscape and designed the building on the assumption of conventional offices. The choice was made at a time when office landscape was new and faddish and not much was known about it. Implementation of the system was by Hancock's in-house design group. Management now feels that office landscape was overdone and shouldn't have extended it up into senior management positions. Recently a few offices have been converted.

A lesser problem is the elevators. As noted, they are double decked and color coded. Yellow ones leave from grade and stop at odd floors. Red ones leave from the upper lobby and stop at even floors. The two lobbies are joined by escalators. The idea was to permit rapid loading and unloading of the building at peak hours. The problem is that people psyche out the system. Employees try to work it so that no matter where they start, they will arrive at the ground floor—possible since the computer eventually gives up and sends you a yellow elevator even on a red floor. The reason, besides convenience, is that some employees, especially older women wearing high heels, don't like the escalators.

There is also still some concern about windows falling out, and some employees won't work near them. The building's east side is favored over the west, which gets some glare. There is no architectural difference between east and west facades. Narrow blinds are available for sun control.

A majority of employees still prefers the Hancock's older art deco Berkley Building across the street, perhaps for its traditional finishes.

As with most office buildings, there's a lack of places to get

Photographs by Steve Rosenthal

Facing page, a typical office landscape situation with some leftover furnishings from former Hancock offices. Left, the high-tech lobby with Oriental rug.

Problems at close quarters, impact at middle range.

away and be private, except for higher executives. Filling this need for others are the cafeteria and lounge, located below street level. What appears to be a stainless steel nuclear reactor, actually the serving area, occupies the center of the high-tech cafeteria. Seating spreads out in all directions and orientation is difficult. Supergraphic signs and huge sculptured apples (by artist Donn Moulton) add brightness but not coherence. The effect is that of being in the below-decks dining salon of an ocean liner.

The lounge next to the cafeteria resembles a bus station. It is filled with impersonal curving red benches on which people sit singly as if waiting for something. When I toured the building with John Zeisel, a specialist in the field of environment and behavior to whom I am indebted for some of these observations, he noted that there is no subdivision, no place to get off and play cards on your lunch hour. Like the tower as a whole, the cafeteria and lounge represent one company, not a collection of groups or individuals.

What employees like best about working in the Hancock are its views out over the city, which are indeed spectacular. When you turn back from them, however, you see little wars between the building and its occupants. To that lobby of steel and supergraphics, for instance, the owner's contribution is an incongrous Oriental rug that floats like a raft in one corner. As a Hancock employee, once you reach a certain pay grade, you can order your furniture from the purchasing department out of catalogs of 10 or so standard varieties. Most people choose traditional, the result being lots of little nests of Spanish provincial in the glass tower. Adding chaos is a large amount of furniture brought to the building from former quarters.

On the bosses' floor, the 59th, these clashes are strongest and most surreal. Leaving the elevator, you turn to see a guard at a desk at the end of a long slot of space, backlit by the window wall. You see nothing else. The guard, it turns out, is alone in a reception hall nearly 200 feet long. The windowless board room has a double-height shiny metal ceiling, lots of electronic gadgets, dull portraits of former Hancock leaders and a remarkable lack of interest or character. In general, identity on the 59th floor is provided not by the evidence of individual personalities, nor by any sense of company tradition, but by contextless symbols. The desk at which the first John Hancock policy was written is displayed as if in a museum. There are furnishings taken from John Hancock's own Beacon Hill home. Two patches of his wallpaper are framed under glass on a wall. At 700 feet above the city, shorn of all their connections with life or with the past, such objects, like collectibles, have little meaning. Each executive on the 59th (there are only eight, plus their aides, on the whole 30,000-square-foot floor) has his own bathroom, with marble floor, walls and sink, a place where, as in his office, he can be utterly alone.

Gorchev & Gorchev, Inc.

Canopies at the entrance, now removed, soon to be replaced.

Beyond the users of any building are its owners. The question of how well the Hancock meets the owner's interests is complicated by several imponderables. One is cost. The final tab of about $160 million, nearly double the projection, was distorted by the technical problems, the blame of which is still being adjudicated.

A second imponderable is population. The company had expected to expand quickly, from 6,300 in 1968 to as many as 12,000 in 1985. However, its total Boston work force today is just about what it was when the tower was designed. This is the result of automation. The Hancock now occupies all but 14 floors of the new tower and still uses its Berkley Building, but has abandoned its previous other quarters. The tower has allowed the company to consolidate, but that need is now less compelling than was imagined at the time. Rents, incidentally, run about $20 per square foot, near the top of the Boston market despite the off-downtown location.

A final imponderable is energy. When the windows were changed from the original Thermopane to half-inch reflective tempered float, the prediction was for a 12 percent loss in U value. Hancock managers now think the loss was greater than that. At the time of change, the HVAC system was beefed up at a cost of $300,000. The building was designed, of course, years before the first energy crisis and, like many buildings of the time, is an energy dinosaur by today's standards. Though nearly half the tower faces south-by-southwest, there is no sunshading. Management says the building is "hard to tune," heating up on the west while it's chilly on the east. Lighting was overdesigned, as usual for the time, and more than half of the ceiling fluorescents are now permanently off.

There is still one very loose string in the Hancock story. As part of the deal over zoning and taxes, the company agreed to convert its property across the street to the east for the use of cultural institutions. That plan fell through and 12 years later, this still hasn't happened. "To me," says Cobb, "the most distressing aspect of the whole outcome of the Hancock is the failure to make that conversion. It made me feel right about this project as a matter of conscience."

Needless to say, no final judgment is possible on the Hancock. I don't think it really succeeds in being a "contingent" building. It's just too big a tail to be wagged by Trinity Church. Most people, architects or laymen, find the notion that the Hancock is a "background building" to be questionable at best, and more often ludicrous. But the goal of making it contingent led to its unique and wonderful form. Art sometimes needs premises that don't bear full examination. Harry Cobb put so much talent and determination into his attempt to defer to Trinity Church that he almost succeeded in upstaging it.

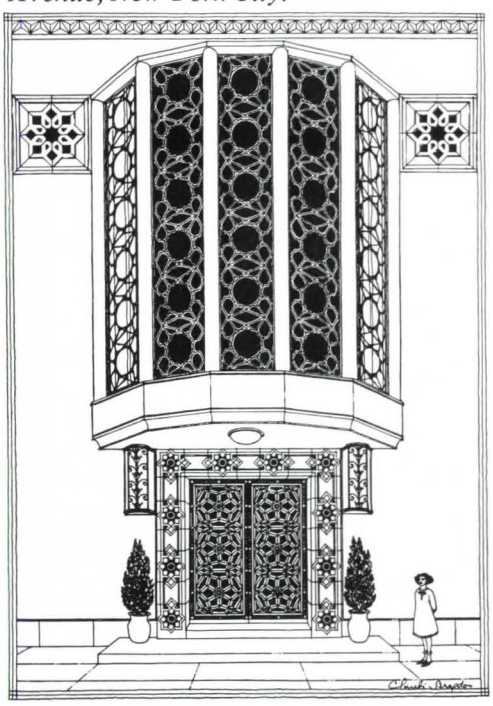
Inside, the Hancock is nothing special. Outdoors at close quarters, it's full of problems. At the metropolitan scale, it's a valuable organizing accent. And as urban sculpture at the middle scale, it's a masterpiece.

"This is such an extreme example of the clash of scales," says Cobb, "of bigness versus smallness, newness versus oldness, of something precious and special in the public realm having to accept right next to it something very large in the commercial world. The case was so extreme. And I suppose that was one of the things that both concerned us and attracted us about the problem. It was so extreme that it would not tolerate anything other than a single-minded solution."

Does the "single-minded solution" mitigate the problem? Or dramatize it? Cobb always has it both ways. The paradox is that both times he's probably right. □

Richard Oliver

A mural by Herman Sachs, left, on the ceiling of John and Donald Parkinson's 1928 Bullock's Wilshire store, Los Angeles, depicts the history of transportation. Geometric ornament, below, from Claude Bragdon's 1924 book, The Frozen Fountain. *Bottom of page, cylindrical radiators ornament an Albert Kahn automobile museum in Dearborn, Mich. Right, polychrome terra cotta patterns Ely Jacques Kahn's 1927 tower at 2 Park Avenue, New York City.*



ORNAMENT

By Stanley Abercrombie, AIA

Relax. It's no longer a crime. The ban against architectural ornament laid down by Adolf Loos in his famous "Ornament und Verbrechen" essay of 1908 has been lifted, and one proof of our new freedom is that the annual conference of the AIA design committee, held this fall in San Francisco, had as its topic "Ornament and Architecture, Reconsidered." Right out in the open.

Organized by committee chairman Roger Clark, AIA, and by conference chairman Robert L. Geddes, FAIA, the three-day meeting was moderated by Geddes, and its speakers included Thomas Beeby, AIA, Allan Greenberg and Kenneth Frampton. Sally Woodbridge pointed out the ornamental wonders of San Francisco's buildings, and Frances Halsband, AIA, and Richard Oliver presented a visual survey of 20th century ornament

Richard Oliver

(from which most of the photographs illustrating these remarks have been taken). Other participants were Henrik H. Bull, FAIA, and John M. Woodbridge, FAIA.

The presentations didn't attempt to conceal differences of opinion. Greenberg called, with considerable eloquence, for a literal return to the classical "traditions which form the basis of our inheritance from the West"; no one else seemed willing to go quite that far. Beeby presented Mies' corner detail at the Illinois Institute of Technology as an example of ornamentation in the very heart of modernism, and Frampton thought "ornamental episodes" could be found "even in the work of Richard Neutra." Halsband reacted against so elastic a definition of ornament. Jean-Paul Carlhian, FAIA, in the audience, reacted in turn against what he inferred was Halsband's idea of ornament as something "applied," suggesting that it must instead be an outgrowth of basic architectural form.

But whether or not one accepts the implications of Beeby's presentation—that ornament, in some form or another, has always been with us—there is no disputing that an important faction of early modernists genuinely *wanted* to do away with it. Loos had really been vehement about it: "All art is erotic," he had maintained, and "the man of our day who, in response to an inner urge, smears the walls with erotic symbols is a criminal or a degenerate. . . . We have outgrown ornament; we have fought our way through to freedom from ornament. . . . Soon the streets of the city will glisten like white walls."

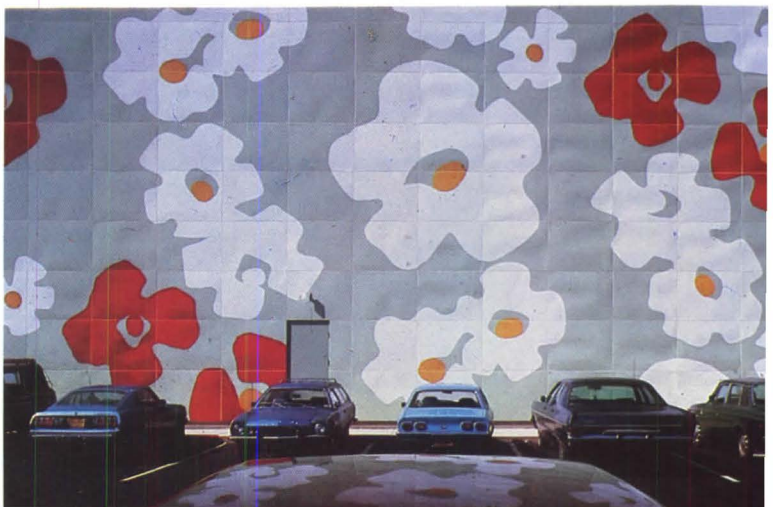
This goal was never reached, of course. No matter how much smooth white stucco they spread over their brick walls, the early

Richard Oliver

'A matter of spirit as well as practicality.'

modernists were never able to make their visions totally manifest. As Peter Blake wrote, in the "Fantasy of Purity" chapter of his book *Form Follows Fiasco,* "The underlying premise of building in the International Style—the premise of sheerness, flatness, smoothness, unornamented plainness—remains, to this day, an impossible dream. Impossible, for the simple reason that the facts of building in the real, outdoor world—the facts of such mundane problems as weathering and maintenance—make it virtually impossible to attain the ideal of a flawless architecture of pure, geometric forms. . . . The product specifications explicitly or implicitly written by the International Style have so far proved utterly impossible to fulfill."

It is an impossibility, however, against which some architects



Norman McGrath

MLTW's faculty club for the University of California at Santa Barbara, far left, is brightened by neon banners by the Elm City Electric Light Sculpture Co. Left below, a flowered facade on the Best Products Co. building, Oxford Valley, Pa., by Venturi, Rauch & Scott Brown. On this page, two stair rails by R. M. Kliment & Frances Halsband: left, at Columbia University's remodeled Hogan Hall; below, at the William M. Mercer, Inc. offices, New York City.

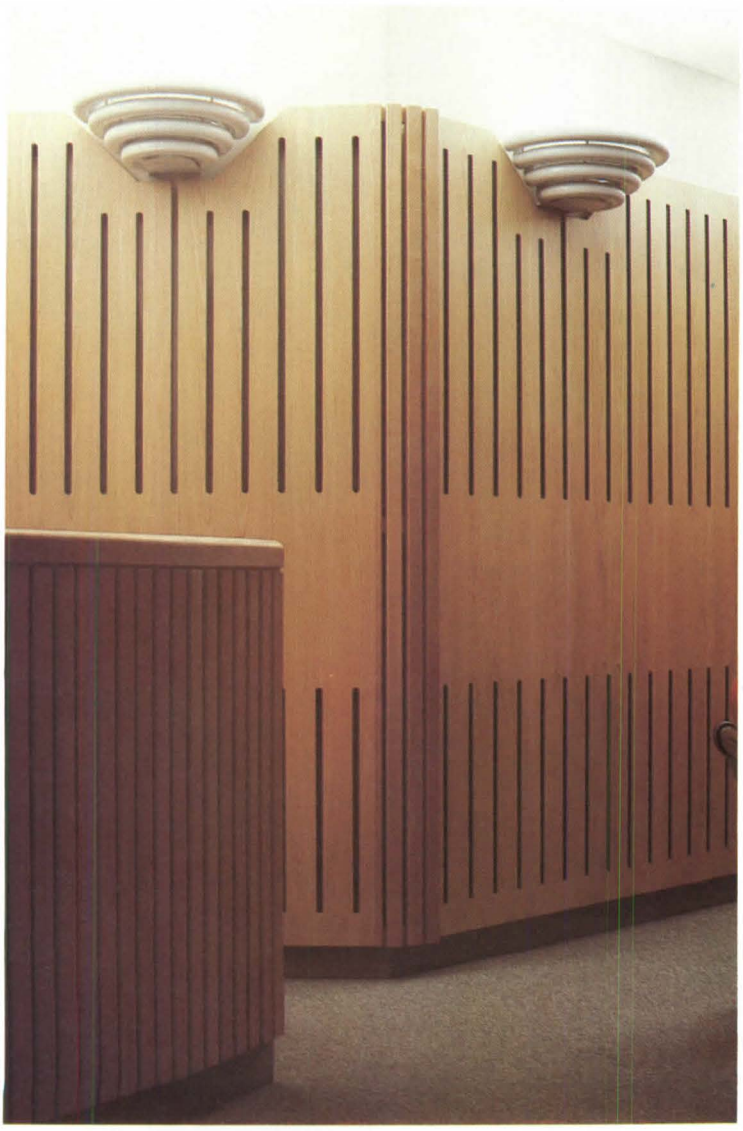
R. M. Kliment

(England's Foster Associates, for example) continue to struggle, and their struggle often produces dazzlingly beautiful results. For architecture is a matter of spirit as well as one of practicality, and tastes for plainness or for ornament are not always cognizant of "mundane problems." Nor has modern architecture ever been monolithic in its desire for the specification of plainness: Frampton complained in San Francisco that the International Style had in fact been "misrepresented by a rather demagogic curatorial operation by Messrs. Philip Johnson and Henry-Russell Hitchcock in their 1932 presentation." (He thought also, by the way, that postmodernism was a similar act of misrepresentation, a "prime example of the manipulatory power of the media.")

Whatever the true state of modernism in 1932, by a quarter century later a divergence from International Style orthodoxy was obvious to all: Breuer and Rudolph were being ornamental in a brutal way, Yamasaki in a frilly way, Saarinen in an expressionist way and Edward Durrell Stone was wrapping everything in ornamental screens. We hardly have to consider a Miesian corner detail as ornamental to admit that ornament has been back with us for some time now.

Frampton clarified the recent history of ornament by focusing on three "key figures in the nature of the predicament we face": In addition to Loos, they were Jean-Nicolas-Louis Durand, the French architectural theorist whose influential *Précis et leçons d'architecture* were published between 1802 and 1805, and Augustus Welby Northmore Pugin, author of *Contrasts* and designer of Gothic facades, Gothic inkwells, Gothic umbrella stands, etc. Durand's writings, Frampton said, "represented already . . . the reduction of classical language . . . to reason and

Laura Rosen



R. M. Kliment

Above, elm paneling and custom lighting sconces in a New York City law office by R. M. Kliment & Frances Halsband. Right and far right, traditional cornices, some serving as lighting fixtures, in the Pittman loft remodeling, New York City, by Richard Oliver.

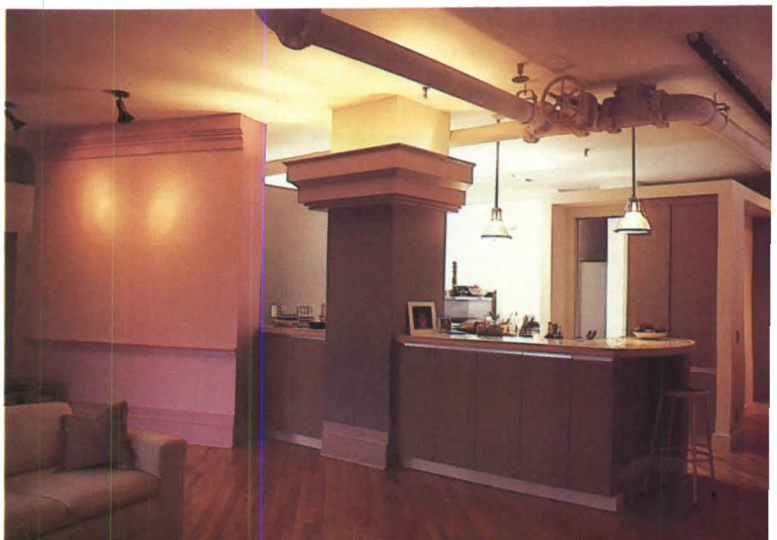
'Some of our best friends have been doing it all along.'

pure reason," and Pugin's efforts were "categorically opposed" to such reductionism. These parallel attitudes can be traced through all 19th and 20th century architecture, Frampton suggested, one chain including Durand, Gilly, Schinkel, Perret, Mies, Hilberseimer ("Durand reduced to rock bottom") and Bunshaft, the other including Pugin, Webb, Morris, Ruskin, Mackmurdo, Voysey, Mackintosh, Olbrich, Shaw, Richardson, Furness, Sullivan and Wright. (Presumably, among contemporaries, Goff could be added to the chain.)

Not everything said in San Francisco was so clear. Ornament is a subject that can easily lead us far afield into considerations of symbolism, of the meaning of forms and even of design as a response to society. "There is a consensus that the modern movement is bankrupt," Frampton said at one point. "If not the modern movement alone, then also perhaps even modern society." But that, to some, seemed the subject for a different conference altogether, and Halsband put this one firmly back on the track by identifying ornament as a fundamental design tool. "The crisis in architecture today," she said, "is not the crisis of the atom bomb and not the crisis of how our clients made their money, but it's still the same old crisis of 'What do I do when I get to the corner? How does the wall join the ceiling?' " In talking about ornament, she suggested, we're simply "talking about good architecture."

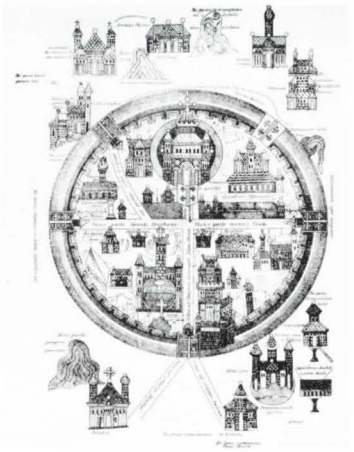
So where does this leave us and what does it augur? While it now becomes clear that ornament is no crime and that some of our best friends have been doing it all along, it is also clear that we have suffered a serious rupture between architecture and the other arts, a rupture we are very far from healing. Modern architecture, whatever its delights, has been notoriously unfriendly to the idea of integrating other, less utilitarian arts, and it is inconceivable that anyone could write now, as Ruskin wrote in 1854, that ornament is "the principal part of architecture" and that "no person who is not a great sculptor or painter *can* be an architect. If he is not a sculptor or painter, he can only be a *builder.*"

But perhaps the healing process is beginning. Geddes reasonably summarized the San Francisco conference by saying, "There is no summary," yet even without a consensus on the subject, it must be salutary for the future of architectural design that ornament is once again a legitimate subject for discussion. □



Richard Oliver

Richard Oliver



Jerusalem as Place and Vision

An appreciation by Lawrence Halprin, working in the Old City.

Jerusalem calls up mystical as well as historical images for most Westerners. To many of them, it is not so much a place as a vision of a holy city sacred and central to three great religions, evocative of the highest and greatest aspirations of mankind—a spiritual presence—a way station on earth to heaven.

But Jerusalem, a city of 400,000 inhabitants, is also a real place that is divided into many parts, with three major sectors. The western part of the city is modern, thriving; the eastern section mostly dates back to the latter part of the 19th century and is Turkish in origin. And then there is the Old City of Jerusalem, the ancient city of the Bible, hoary with age and soaked in memories behind its walls: the city of Solomon's Temple, of the Mosque of Omar, of the Holy Sepulchre and the via Dolorosa.

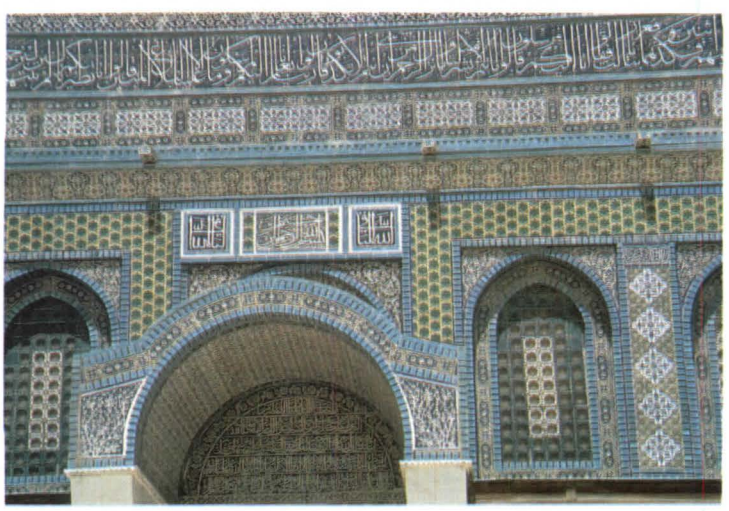
My own connections to Jerusalem go back to when I was a boy and my parents took me to see this city of my ancestors. I remember my earliest impressions of this strange and wonderful place: the golden stone from which the city was built, the narrow, winding bazaars full of the smells of spice and fruits. I remember the soft swish of camels' feet, the cries of *"E-E-SH"* when Arab vendors warned pedestrians that their donkeys wanted to pass. I remember the piles of beautiful pottery containers leaning against the walls, the narrow gates into the city, the life hidden behind shutters and garden walls and coffee houses where men played *SHESH-Besh* (backgammon) and drank coffee and smoked their *Nargillahs*. Most of all, I remember the groined archways, the domes, the rooftop gardens, the latticework screens, the intricate and delicate architecture.

I have returned many times as a consultant and a designer for the modern city and many of its institutions. Recently, Mayor Teddy Kollek, who has devoted much thought and energy to improving Jerusalem, asked me to work in the Old City on the difficult problem of designing an underground parking structure and transportation terminal and its access and somehow integrate it into the Jewish Quarter of the Old City. The project includes archeological gardens, the preservation of a partially destroyed Byzantine church and the reconstruction of housing reduced to rubble after the 1948 war.

The entire project area presents what seem like irreconcilable problems: how to preserve the ancient structures but introduce new uses, how to stay with the scale and grain of this ancient and beautiful city, how to link into the context of the surrounding landscape and cityscape. But, as we shall see, the essence of Jerusalem has always included change and rebuilding. Today, its vitality is not as a museum or a "boutique-ized" old city but as a bustling, organic 20th century place.

How could we insert a series of modern facilities into this ancient quarter to make modern life livable and yet preserve the indigenous spirit and character of this quarter of the city? The challenge required looking carefully at the history, archeology, transportation and spiritual values of the area. Perhaps most significant to me was to discover why and how Jerusalemites throughout the years have felt such a strong personal identification with the city, what has made it so important to the world, why all the Western religions have arisen there and how to embody this quality in new construction.

There is nothing significant about Jerusalem's location. It possesses no special physical attributes that would make people want to locate there. It has no harbor, no strategic location, no important natural resources, no inherently great views. It was not on an important caravan route nor was it easily defended. The climate is not particularly attractive and the soil is rocky and inhospitable. Perhaps the significance of its site lies in its lack of the traditional, historical factors of location. It is as though this place has been mystically inspired to fulfill its ritualistic role



At the wailing wall near the Old Temple, a rabbi reads scripture from the Torah during a bar mitzvah (facing page, photograph by Ken King). Above, a 12th century drawing of the Old City. Left, a mosaic archway lends a spot of color in the city of stone.

Mr. Halprin practices in San Francisco. For this project, the internationally known urban designer and landscape architect was assisted by Tom Aidala for architecture, Peter VanDine for housing, Norman Kondy for urban design and Ephraim Hirsch for structure.

A city of golden stone and narrow passageways.

as an emotional and religious symbol for people of many faiths and beliefs throughout the world. What has emerged is not due to what was there in nature, but what people have invested this city with.

Ancient Jerusalem sits on a rocky plateau 2,600 feet above sea level on the knife edge between the Judean desert (sloping eastward down to the Dead Sea) and the Mediterranean to the west. To the east the climate is hot and dry. Few plants grow. There is almost no rainfall. The desert *chamsin* wind blows off the Arabian plateau. Even today, the black tents of the Bedouin are the only man-made structures in this wilderness and the black goats cascade down the slopes like a beautiful woman's hair as in Solomon's "Song of Songs." On the Mediterranean slopes to the west are vineyards, olive groves and flourishing pines and Italian cypress trees, and the wild cyclamen and anemone color the ancient stone terraces in the moist springtime.

Ridges look down on the ancient city, which sits as if held in the palm of a great hand. It grew from the golden pink limestone of its base rock cut to make its buildings. Jerusalem was a Canaanite town in 2,000 B.C. at the time of the Egyptian pharoahs when it was first mentioned in the Execration texts (curses used to drive away enemies).

Some of the most symbolic events of mankind have occurred on the hills of Jerusalem. Abraham went up to Mount Moriah in Canaanite times to sacrifice Isaac in the same location where the Temple of Solomon was later built and the mosque now stands. But God stayed his hand and in that one gesture the abandonment of human sacrifice was signified. On that same spot, David came in the 10th century B.C. to found a permanent home for the wandering tribes and their symbolic link to God, the Ark of the Covenant. He discovered a small spring (the Gihon Spring) nearby on the flanks of Mount Ophel in the Kidron Valley and started the City of David, now just below the great western wall of Solomon's Temple. This act signified the putting down of roots, the transition from a wandering culture of nomads to the beginning of settlements and the founding of a permanent city. Later, his son Solomon moved uphill to the city's permanent site, improved the water sources, built the first ramparts and encased the tent of the ark in a great and permanent temple whose western wall still stands.

The story of Jerusalem from then on followed the course of its walls. Each generation strengthened them, enlarged the compound, widened the area and improved the water supply. The Old City is now about 217 acres, holding 25,000 inhabitants. But at the time of its greatest expansion under Herod and the Romans, the population exceeded 150,000. The walls have been sacked and demolished innumerable times and each time rebuilt. Wave after wave of conquerors has invaded, destroyed the city and dispersed its people first to Babylon, then to Rome and throughout the then known world. Each time they returned and rebuilt the city, usually on the foundations of the old walls.

The existing configurations of the walls date back to Roman times when Hadrian in 135 A.D., tired of the constant Jewish revolts, demolished all physical reference to the Jewish city by plowing down the structures. Then he rebuilt Jerusalem on the model of a Roman camp, with axis and cross axis streets called the *cardo* and *decumanus* with the forums at their intersection. He called it Aelia Capitolina, converting it to a Roman city. These major streets still exist on their Roman alignment and at their intersection a column still stands with the inscription "10th Roman Legion camped here."

Jerusalem is where Jesus was crucified and buried and where Mohammed on the site of the ancient temple sprang to heaven on his horse, once again linking heaven and earth. The crusaders left their mark in their many ancient churches and built the main structures of the central bazaars over the Roman *cardo,* which is still in use. The city echoes in its architecture the passion of its spiritual and temporal human encounters. You can feel the presence of these happenings even today as you walk through the streets and bazaars.

Until 100 years ago, all the residents of Jerusalem lived within the walls. At night, even those who worked outside during the day returned to the security of the walled city. Life outside was harsh and dangerous: Marauding bands and brigands made it perilous to remain outside the city walls. So even recently, the walls were a significant functioning presence and the gates acted as transitions between the threat of the outside world and the security of the inner. There are 11 gates to the walled city, of which four have been sealed for centuries. The gates provided access but also served to prevent entry, and their towers acted as security positions for guards. Because of their importance, the gates were the focus of very special architectural design attention and architects from many parts of the then known world were commissioned to design them. Most followed the usual basic plan of the L-shaped entry which made the defenders less vulnerable to attack. Zion Gate, which abuts our project, follows this pattern.

Over the centuries since crusader times, the Old City has become divided into four neighborhoods reflecting the four main religious divisions: Christian, Moslem, Armenian and Jewish. The Jewish Quarter clustered close to the side of the ancient temple and clove to its western wall, sometimes called the "wailing wall" because it was the place where the Jews for centuries returned to pray and lament the loss of their temple and their country. During the War of Independence in 1948, the Jewish Quarter was occupied by the Jordanians and destroyed; access became impossible. By the time the Old City was opened up again in the 1967 Six Day War, the Jewish Quarter had been largely reduced to rubble: Buildings, synagogues and housing had been completely demolished and a major effort was mounted to rebuild. Reconstruction was assigned to an Israeli government authority (similar in many ways to U.S. redevelopment authorities) called the Company for Reconstruction and Redevelopment

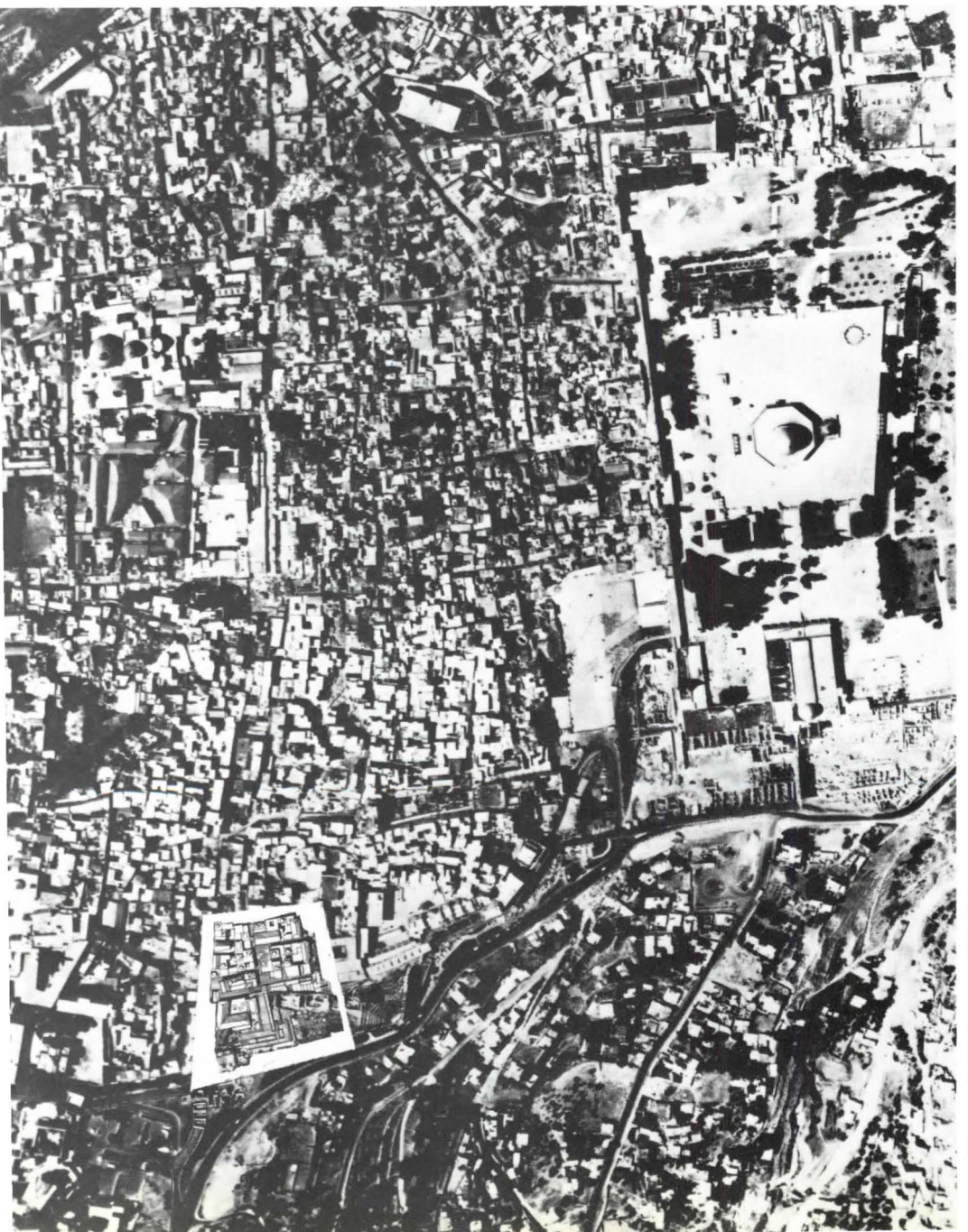
of the Jewish Quarter, or the Company. It is for this area and under this authority that our project is being designed and will be constructed.

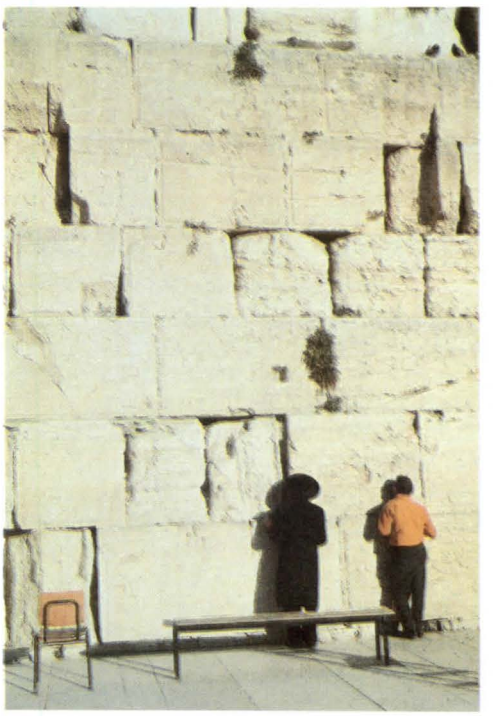
In developing our approach to design, the emotional and architectural character of the Old City gave us clues to what we should do. First and foremost, of course, is the stone: that native, pinkish, hard, dolomitic limestone bedrock on which the city was first built and which has provided the materials of its building ever since. In ancient times, the use was simply a matter of availability. More recently, under the British mandate, stone as a facing (if not structural) material was made mandatory by law, and this rule has been followed by the city government of Israel. The decision was fortunate because a unity of material and color and detailing has resulted, even in the new city, which conveys a sense of organic relatedness, of *tout ensemble,* throughout the city. The use of stone to a degree limits the architectural possibilities, yet its advantages far outweigh the limitations. The stone glows golden in the evening sun. That is why Jerusalem is called *Ir Zahav*—the golden city.

You can read the historical period of the buildings by the way their stones were cut and edged and dressed. In early times, dressing was done by hand. The tool types determine the finish. Early Nabatean and crusader stone work was done by a *shahuta* tool that cut discontinuous grooves diagonally, often with a margin around the stone. The typical Herodian stone of 30 B.C. that was used to build the western wall of the second temple was finished with a "comb pick dressing" and a wider margin. The size of the blocks is characteristic too: It has always seemed strange to me that the more primitive and ancient the building, the larger the blocks. The newer crusader and later Suleiman (the Magnificent) stones that cap the walls and battlements are small compared with the massive Herodian (37 B.C.) and Hasmonean (165 B.C.) blocks that reached 14 meters in length.

Many of the city's newer buildings have used sawn faced stone because it is cheaper and hand dressing is becoming difficult. But our own intention is to use rectangular, natural bush hammered stone with rough chiseled *taltish* finish to link it with the surrounding old buildings. Garden walls may be rubble or unworked *tubsa,* depending on their location.

The relationship of heights of buildings to open spaces—the pedestrian ways, lanes, courtyards and public piazzas—is critical. The grain of the Old City is largely established by these elements. The Jewish Quarter is wholly pedestrian and will be continued that way, except for special small service vehicles. Typical lanes between buildings have always been narrow: two and one-half to four meters in width. Buildings are typically two to four stories high. Housing is constructed around small inner courtyards six to eight meters across. Squares are small and are paved in random ashlar stone. There is a careful progression of spaces, from public street and square to passageways serving several courtyards to common courtyard to private house. This ancient hierarchy of an open space network will be continued. It estab-





Left, the Old City from the air with Halprin's project superimposed (lower left) in the Jewish Quarter. David's City is at lower right and the octagonal Mosque of Omar is at upper right. The Western Wall of Solomon's Temple is below and to the left of the mosque.

Photographs by Lawrence Halprin

lishes an organic, anthropomorphic quality of life in the Old City. One feels related in scale, in measure, in touch and feel to the spaces and the architecture in sensory and deeply felt psychological and emotional ways. This feeling of relatedness to the environment is uniquely enriching on a human level. You feel the city as your own house, your own environment. It is interesting to note that the Temple Mount has always been referred to as *Har Habayith,* House of the Lord.

Courtyard entrances are arched and most buildings have covered entrances. Roofs are flat, many have domed portions, and usually the roofs are used for gardens and as private terraces. In some areas, wooden bay windows and trellises protrude over the street and give views down the alleyways. Trellises and arbors covered with grape and other vines shelter the rooftop gardens where families still sit in the cool evenings. The most celebrated use of one of these roofs, of course, was when Bathsheba, while taking a bath on the roof in the evening, was seen and lusted after by King David.

The dominant street in the Jewish Quarter is the shop-lined Street of the Jews *(Rechov Hayehudim),* which follows exactly the original alignment of the old Roman *cardo* and connects the quarter to the main Old City center and the Roman *decumanus,* now called David Street. This *cardo* is a major element in the city both symbolically and functionally, and it must be preserved and utilized in our design development of the area.

Views are superb. They open out at the edges near the city wall, giving vistas of the Mount of Olives and the ridge lines surrounding the city which are topped by the towers of Augusta Victoria Hospital and the Church of the Ascension. Glimpses of the domes of the Mosque of Omar and the Al-Aksa Mosque can be maintained.

The area inside the wall contains ancient structures. Foremost among these is the Byzantine NEA Church, built by the Emperor Justinian in A.D. 543, which faces on the old Roman *cardo.* There are innumerable underground vaults and cisterns. To the east on the site of an early Greek amphitheater, a new small outdoor theater is being constructed. On the terminus of the *cardo* are the remains of a Mameluke Ayubic gate and the paving of an early road which must be preserved. All these are to be incorporated into a garden between the outer wall of the city and the facility we are designing.

The program for the rebuilding of this final area of the Jewish Quarter was established by the city and the Company. It includes a terminal for buses bringing residents to and from the quarter and their workplaces in the new city; underground parking for 600-650 cars; approximately 60 new housing units; a warehousing and cold storage distribution center; 1,500 square meters (almost 5,000 square feet) of commercial space including some restaurants and cafes; an archeological garden to preserve and give access to the excavations and Byzantine structures recently uncovered; storage and facilities for a fleet of small electric carts which will be used for servicing the quarter, and a series of plazas, walkways and paths interlacing and connecting to the neighborhood.

Perhaps the most difficult task I faced was to discover a discreet way for cars and buses to enter the quarter through the ancient city wall. Earlier proposals had shown a breach through the wall with a new gate that drove through the Turkish tower and arrived at an upper level plaza. This earlier solution proved unacceptable for several reasons: It violated the archeological integrity of the wall, it would be noisy and traffic would become unbearable in what should remain a basically pedestrian area. In addition, the character and quality of the environment would be harmed by a modern version—the car—of the ancient attacker.

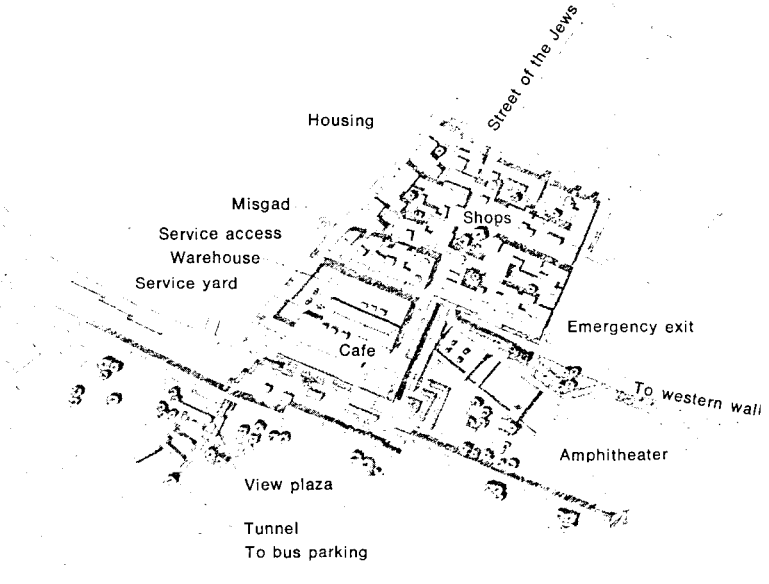
The solution we finally reached resolves these problems by entering the quarter through an underground tunnel. Our plan brings vehicles under the tower and provides pedestrian access to the quarter at an upper level, thus leaving the tower and the wall intact. The tunnel leads past the remains of the Ayubic gate directly into an underground transportation terminal, which provides a drop-off area for buses, both for residents and visitors. This has been located at the grade of the Roman *cardo* so as to relate to the ancient stone paving (which has recently been uncovered) and the entry to the Justinian Church. The view from the arrival point is breathtaking. On arrival, travelers may walk down into the archeological gardens and continue down along the ancient Ayubic road into the outdoor amphitheater and the underground vaults of the church, or they can rise to the plaza level above the terminal from which they can continue into the Jewish Quarter. Parking for 640 cars is provided in a four-level garage connected by ramps. The terminal is designed to reflect in modern terms the spatial grandeur and complexity of crusader vaulting and light quality seen in the Old City.

The design concept is of "hanging gardens" in which the levels of the structure will be terraced and stepped back and planted at the perimeter, thus becoming an integrated part of the garden landscape, not a monolithic intrusion. The sides will be open and low velocity fans will vent the structure through tiled screens, thus avoiding massive mechanical systems and expensive energy use. The structural system will be poured-in-place and precast concrete; walls and all exposed surfaces are native stone with *taltish* finish.

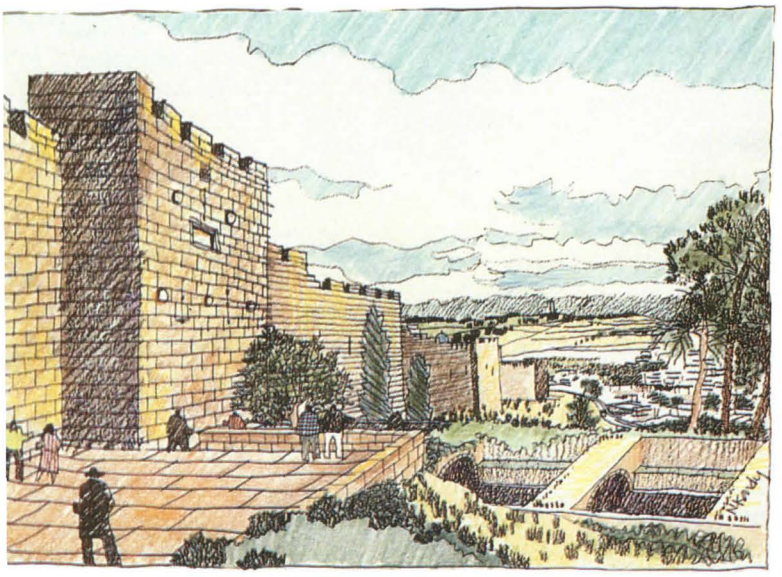
The roof design continues the grain of the Old City. Courtyard housing for 60 families is built over the garage and lines the plazas. Along the streets and walkways are shops, cafes and outdoor sitting areas with magnificent views of the ridges. Small scale commercial space will continue the uses and character of Rechov Hayehudim on the alignment of the Roman *cardo.* The open space network designed on the ancient model of an intricate progression of humanly scaled and detailed outdoor living areas continues through the quarter and out into the garden and the Old City's walls.

At Jaffa Gate, main entry to the city, in a modest niche, is the tomb of the architect who was brought from Constantinople in 1535 by Suleiman the Magnificent to rebuild the gates and walls of Jerusalem. The story goes that he forgot to include Mount Zion within the walls and, in a fury, Suleiman had him beheaded. I have discussed this story at some length with Mayor Kollek and he assures me of leniency should I inadvertently omit something in my design. □

Site plan and model (across) show placement of major elements in Halprin's project, called Jerusalem Rova. A tunnel under the Turkish tower in the ancient city wall (top photo) will bring vehicles in to the area while allowing the wall to be kept intact.



Drawing by Lawrence Halprin



Egypt's Prophet of Appropriate Technology

Hassan Fathy is honored for a lifetime of service to tradition. By Robert B. Marquis, FAIA

The largest single bequest in the Aga Khan award for architecture (see page 10) was a special "chairman's award" of $100,000 to the 86-year old Cairo architect Hassan Fathy, not for a single project but for a lifetime of leadership in encouraging the preservation of indigenous building methods and traditions.

Three years ago, Fathy was made an honorary fellow of AIA. Subsequently, Mr. Marquis, founder of Marquis Associates of San Francisco, then an Institute board member, formally presented the honor to Fathy on a trip to Cairo. These are his recollections of the man and the encounter. Ed.

For most of his professional life, Egyptian architect Hassan Fathy, Hon. FAIA, has preached, taught and demonstrated through his work the need for an "appropriate technology," especially as applied to rural housing in the Middle East. Drawing from the native genius of the ancient rural village architecture and town planning, he has fostered revival of the art of building with mud bricks by training young craftsmen in the dying art of brick vaulting and dome construction. He has taught the cooling of houses through natural means by proper orientation to air currents and the design of "wind catches."

In the developing countries, and especially in Egypt, where Western "high technology" is coveted, envied and often considered a panacea, Fathy's ideas in the past have generally been rejected. His experiments considered failures, he has been attacked by his detractors as an arch conservative. His book, *Architecture for the Poor* (University of Chicago Press, 1973), has been published in English and French, but is not available in his native tongue, Arabic. However, in recent years, as it has become ever more evident that imported technology is failing to make any meaningful inroads on the ever-increasing problems of rural housing, Fathy's ideas that emphasize self-help, indigenous materials and appropriate traditional technology are finally beginning to draw a serious following in Egypt.

Hassan Fathy is short, wiry, dapper, attractive—a real charmer. He is often compared to Bucky Fuller, mainly for his zeal and unconventional ideas, but also in part for his appearance and mannerisms. He is a nonstop talker, lapsing from French to English, both of which he speaks fluently; I suspect this is more for effect than for lack of the proper word. He is either a poor listener or hard of hearing, perhaps a little of each, and will repeat the same stories over and over again. One gets the feeling this is because he is desperately trying to put across his ideas to anyone who will listen and because he thinks he is running out of time to do so. Those who listen are mostly foreigners, or young Egyptian architects, romantics and idealists. His home seems to be open to all, especially at tea time when there is a parade of admirers and the curious who sit in his small apartment and listen to his ideas.

Fathy lives down a rubble-strewn street in the shadow of Cairo's Citadel and the Sultan Hassan Mosque, one of whose wings he plans to take over for his "Institute." This is a very old, poor quarter of Cairo where he has restored an old Islamic house for Sadruddin Aga Khan, one of his rich patrons. The old parts of Cairo, the Mosques and the few Islamic houses that remain are in a shocking state of neglect and disrepair, and only a few artists and eccentrics have recognized the beauty of these neighborhoods and the houses and have moved back in among the poor.

As you enter from the dirty, noisy street through an unassuming door, you are suddenly in a beautiful and serene courtyard. Fathy is fond of pointing out that the traditional Islamic house turns inward and "once you enter the front door you are in the country," and how Cairo has been ruined by "European" architecture which, instead of turning inward, is oriented toward the car-infested street. He frequently uses "European" or "Western" architecture as pejorative terms.

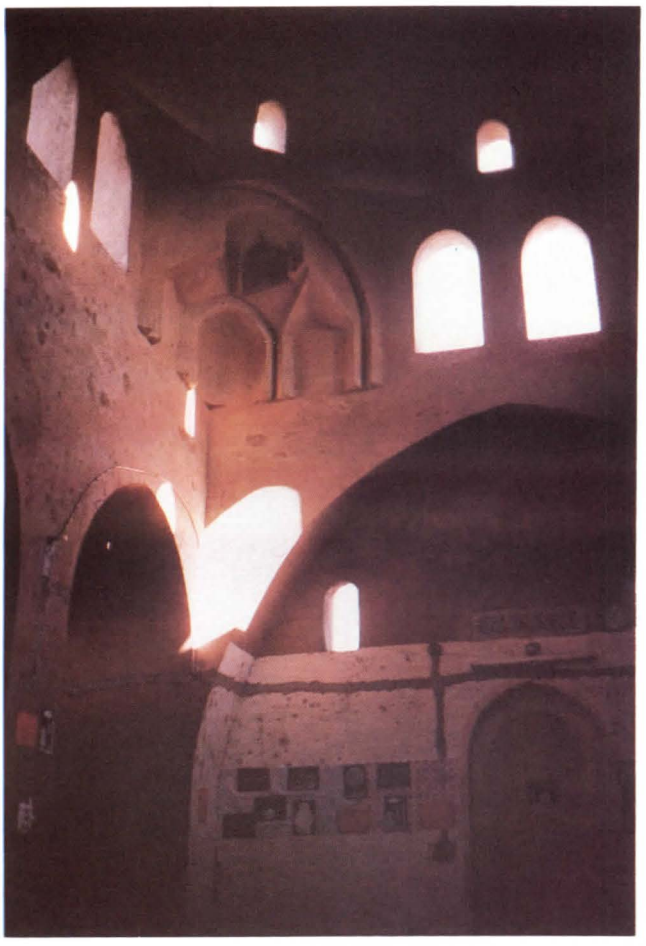
Fathy's own apartment is up four long flights of stairs and across a rooftop. It is a bachelor scholar's pad, strewn with models of projects that probably will never be built, books, phonograph records, a few Islamic art objects, a *mushrabiya* (wooden screen) and some examples of stained glass set in plaster, a vanishing art.

He is a man of contradictions. Dressed in Western clothes, speaking fluent English, he will quote poetry from the Koran, or jump up to play Bach or Brahms on his excellent German phonograph given to him by his noble patron when he would not accept an architect's fee for the Islamic house restoration.

All the while, he extols the virtues of an appropriate technology (he says there is no such thing as "low" technology) and laments the evil influence of Western architecture and the harm its technology has wreaked on his beloved country. He describes how the Aswan High Dam, which will give Egypt enough hydroelectric power to manufacture aluminum, now prevents nutrients from flowing down the Nile, depriving the farmers of the rich fertilized soil needed for their crops and thereby altering the mutual relationship of Egyptians and their great river that has evolved across millenia. He describes in gruesome detail how prefabricated "Western" flat roof concrete boxes built as experimental housing for the villagers became so unbearably hot and stifling that small children died from the heat. He explains that a farmer with a wooden plow can cultivate one or two acres but, if he has a tractor, he will cultivate 25 acres, thus putting 20 other farmers out of work, who subsequently move to the city and starve in the slums. He maintains that the house in the village is "the self-portrait of its owner with which he faces the community" and the architect who designs a thousand houses at one time is "denying creativity to himself and humanity to man."

It is these ideas that cause his detractors to label him as a reactionary, wishing to impede progress and the introduction of high technology in his country. His supporters, on the other hand, point out that even if massive technology provided the solution instead of introducing new problems, Egypt is much too poor to import it in sufficient quantity to make a dent in the growing problem of rural housing.

Of the few opportunities that Fathy has had to translate his ideas into buildings, the most well known is the village of Gourna, which he started to build in 1945 with financing from the Egyptian government as a demonstration of the advantages of this small-scale, grassroots technology; the effort was abandoned in 1948. (The trials, tribulations and eventual failure of this village is the subject of *Architecture for the Poor.*) The remains of Gourna, now occupied by squatters, stand across the Nile from Luxor, within view of the people who were intended to live there. They refused to be relocated from their houses



Hassan Fathy in his Cairo apartment, and three views of his work in Gourna: above, traditional forms with 'pigeon towers'; left, the khan (inn) on the main square, and the mud brick dome inside the mosque.

Photographs by Robert Marquis

located on top of the grave sites of the "Tombs of the Nobles" because they had lucrative careers there in the tourist trade and grave robbing.

Nevertheless, Gourna's mud brick houses, brick vault and dome roofs, its town plan with elegant mosque, school and marketplace still exert forceful witness to Fathy's ideas that rural villages can and should be built using indigenous materials, self-help labor, modeled on ancient village plans and utilizing traditional architectural styles and construction techniques.

The village has become a place of pilgrimage for foreign and young Egyptian architects. These Egyptian architects, however fascinated they may be, are trained in schools modeled on our Western architectural schools. As a result, they are eager to build with steel and glass and have little interest in returning to the villages or building with the techniques of their forefathers. Perhaps what is needed is a new breed of paraprofessional, a kind of "barefoot architect-social worker" willing to work with the villagers and deal with their rural problems through Hassan Fathy's "appropriate technology." Knowledge of water purification, sewage disposal and perhaps birth control is needed as much as skill in town planning and mud brick vaulting.

At the time of my visit, Fathy was working on a "mud brick" resort hotel "for an American client—of course." He implied that most Egyptians lack the foresight or imagination to put his ideas to work. He refuses to see the Disneyland aspect of that project—rich tourists cavorting in indigenous peasant village-like surroundings. The architectural needs to build and see theories take three-dimensional form override any qualms he may have about applying vernacular technology to an expensive resort. □

School Designed Both with and for a Navajo Community

An unusual programming process responds to a desire for self-determination. By Sally B. Woodbridge

Eighty-five miles southeast of the main Navajo Reservation in New Mexico, west of Albuquerque, a band of some 2,000 Ramah Navajos (Ramah is its principal town) occupies a semi-arid plateau of about 230 square miles. The land, separated from the main reservation even as the band is separate from the larger tribe, is a checkerboard of Navajo and other ownership—Mormon, Santa Fe Railroad, state forest reserve, etc. Nonetheless, it is a proud community welded together by a now historic battle over its right to plan and carry out the education of its children.

Visitors travel on Highway 53, an historic east-west immigrant route with views of spectacular sandstone formations. One of these, El Morro, bears inscriptions in Spanish on its base that date back to the 16th century; on its top are the ruins of a prehistoric pueblo. This cultural layering is typical of the region. Increasingly in the last five years, visitors have come to see the Pine Hill School, the nation's first all new, self-determined native American school.

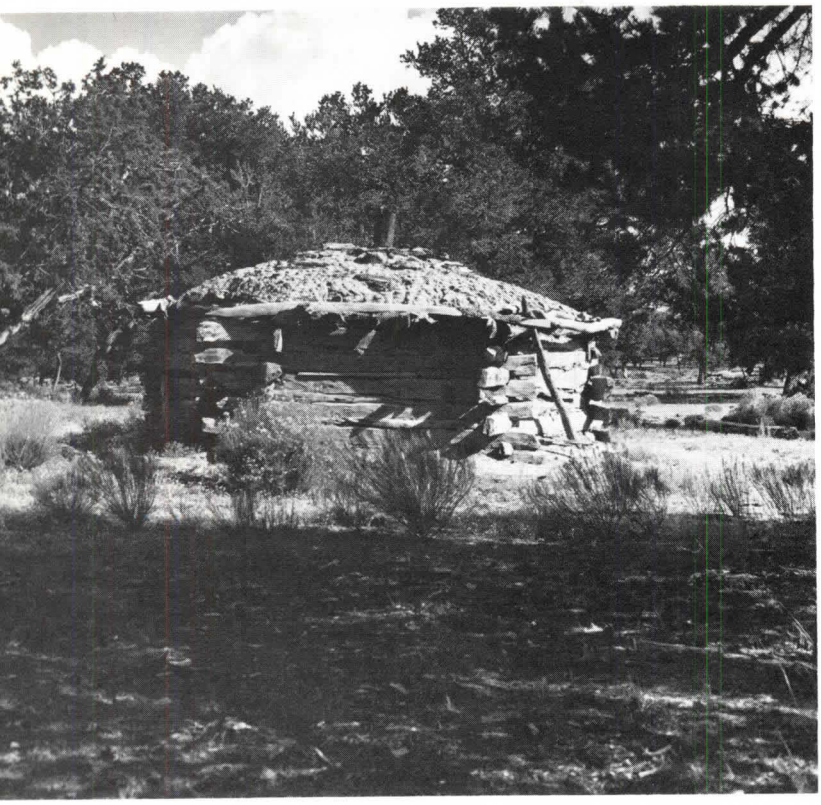
The half-completed campus with its seven permanent buildings occupies a knoll with a sweeping view of the limitless horizon for which the Southwest is famous. Pine, or piñon, and juniper trees dot the land at regular intervals. The school's architect saved the trees on the site; they coud not save the native bunch grass which, once uprooted, cannot be resown. So the buildings sit in bare earth traced with asphalt paths.

When I first visited the campus this June, the midday temperature was 110 degrees. The place was deserted because the water system, based on wells that go down more than 3,000 feet, was turned off in order to clean the storage tanks of mineral deposits. Water is said to fracture, not flow, in this "land of little rain." Even without people, there was a strong sense of place.

When I returned in October, the school's circular paved central space was continuously animated by people criss-crossing in pairs, groups or streams, depending on the time of day. In and outside the buildings, the inhabitants acted like

Ms. Woodbridge is a writer and architectural historian in Berkeley, Calif.

Photographs by Joshua Freiwald



Communicating with images more than words.

those of schools anywhere in the U.S. Still, the Pine Hill story is unique. No matter how many analogies one makes with other, more familiar contexts, the action will never unfold quite this way again.

In 1968, the Gallup-McKinley County school board closed the Ramah public high school for program deficiencies and structural reasons. Opposed to sending their children off the reservation to school in Zuni, parents sued the county to reopen the school. They lost this suit but won a subsequent one for bus service to the county school in Gallup, farther away but at least on the reservation. But the buses could not cross the county line. The majority of the students who lived in the neighboring county were still without a way to get to school. For them the alternative was attending U.S. Bureau of Indian Affairs (BIA) boarding schools, all far enough away to require relocation and disruption of the family.

Determined to have its own school, the Ramah community elected a five-member school board in February 1970. Citing an 1868 treaty that stipulated one teacher for every 30 students, the school board petitioned the BIA to grant them a contract to build a new facility. When the request was refused, the school board and other representatives went to Washington, D.C., where for two weeks they held a sit-in at the BIA office and made the rounds of other government agencies. They also sought help from foundations in Washington and New York City. The outcome was an agreement with the BIA allowing the school board to plan the educational program on a contract basis. With $65,000 provided by the Navajo Office of Economic Opportunity, volunteers renovated the old Ramah high school and reopened it in August 1970. Federal grants paid for the various instructional programs and for operation of the country's only Indian operated radio station. A congressional appropriation made it possible to plan a new facility. In 1972, the school board engaged the Berkeley, Calif.-based architectural firm of Hirshen, Gammill, Trumbo & Cook to begin feasibility studies and preliminary design.

In 1974, Congress passed the Indian Self-Determination Act codifying the right of native Americans to control their cultural, economic and social affairs. Designated an agency of the BIA, the Ramah Navajo School Board, Inc., received funds to build the new school on the reservation in phases. The Pine Hill School officially opened in 1975 with a high school, elementary school and gymnasium. Portables, or trailers, were moved on-site to house staff, administrative offices and other support activities. Since then, three more buildings—the kindergarten, clinic and library/media center—have been built, the last finished this summer.

This orderly chronology of events masks an exceedingly complicated and intriguing process. The first and crucial question for the architect was how to set about designing an educational institution for a people determined to express what they saw as their rightful place in contemporary society, but with no experience in building (their culture had no built form other than the hogan) or in educational planning.

The architect had considerable experience in designing for minority groups. In the mid-'60s, Sanford ("Sandy") Hirshen, AIA, and his partners, Ron Gammill and Jack Trumbo, were working on prototype housing for California's migrant farm workers and began to develop an approach to programming based on methods being pioneered by the University of California, Berkeley, where Hirshen taught. Recalling this period and subsequent work in housing for the elderly, Hirshen says, "We found ourselves dealing with populations and subcultures we couldn't hope to understand by ourselves. The advocacy role replaces the traditional architect/client relationship with one that is more intimate and more blurred. The lack of prototypes doesn't mean freedom from constraints. Contrary to what you might think about this kind of practice, nothing is really a fresh start. You always enter an ongoing process and have to unravel the previous fabric of decisions in order to understand how to begin." He adds that over the years he had worked out a flexible, eclectic approach to getting information, based principally on interviews and written questionnaires.

At Ramah, the architect used a novel tool to help ferret out the community's needs and wants. Called the "prospective user perception survey," it was devised by Joseph R. Harding, president of Policy Research and Planning Group, together with Dennis Cook, a Hirshen associate who lived on the site for about

a year as project manager. The survey included photographs of residential and institutional buildings—five groups of eight photos each—to which all 2,000 of the Ramah people were asked to respond. Did they like the photo? Did they dislike it? Why? Though they did not show traditional Indian styles—and, in fact, deliberately avoided stereotypical southwest Pueblo images—the pictures showed standard architectural elements, such as fireplaces and roof forms as well as different color schemes.

Why use pictures? "Navajo is a spoken, not a written language," Hirshen explains. "Since what is said is open to interpretation, we felt we couldn't rely on verbal communication. It was logical to use visual material for which people could express either a simple preference, disdain or something in-between."

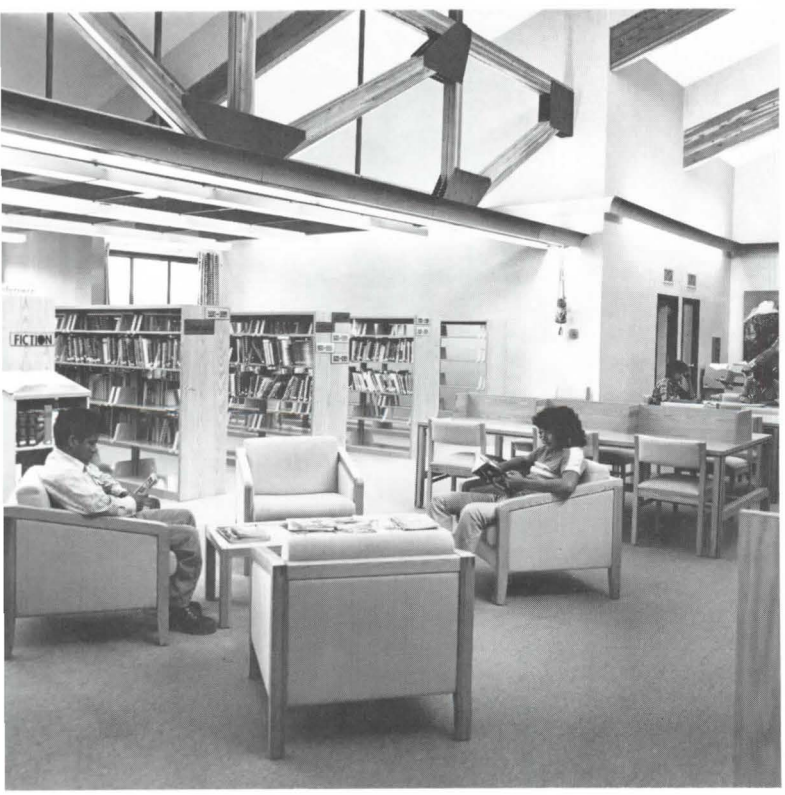
The purpose of the survey was two-fold: First, the architect wanted to know which buildings and functions were most important to the community. Hirshen knew the project would have to be built in stages. "It was a prototype and there was enormous opposition in Congress to Indian self-determination; it was clear to us that it wouldn't be funded all at once." Second, the architect expected the survey to reveal the Ramah's preferences about how a building should look and feel.

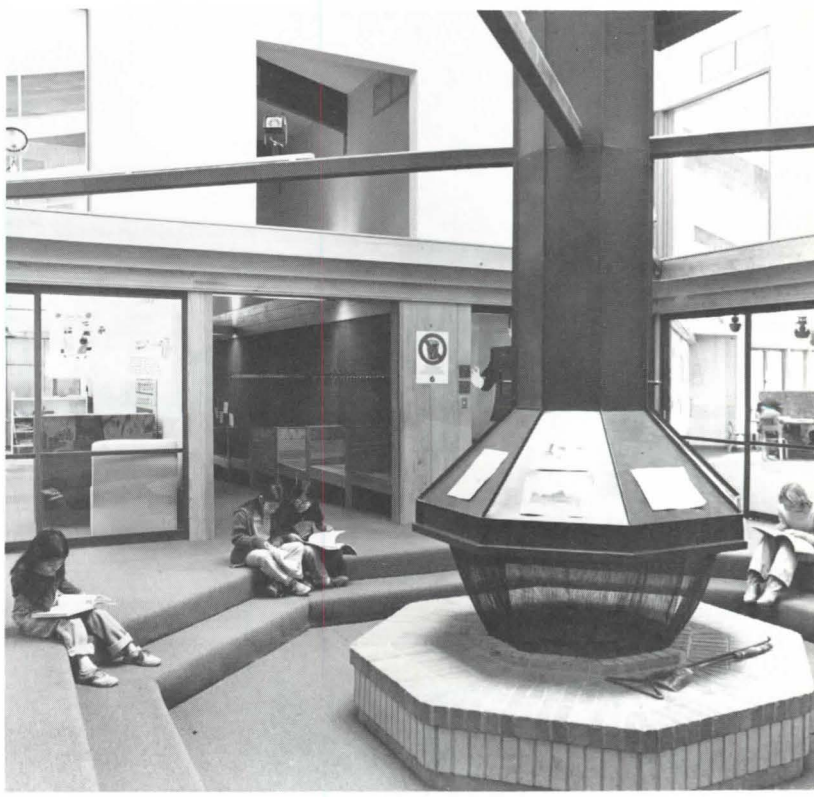
"We had some hidden agendas," explains Hirshen. The BIA had established a program for the school, standard boiler plate. The architect hoped to use the survey results as ammunition in fighting some of the more absurd-seeming aspects of the BIA's program. It included, for instance, a 2,000-seat theater. "The results of the survey allowed us to phase it in much later, put it at the bottom of the list of priorities and gave us a logical basis for putting it off until about the year 2050." It also reinforced the architect's decision to make the school considerably smaller than required by the BIA and so avoid recriminations in the future that the school was overbuilt. The BIA program had more square footage than could ultimately be justified, and both architect and community wanted to establish a realistic posture with Congress.

In an attempt to gauge the Ramah's esthetic preferences, the survey recorded, among other things, attitudes toward previously attended schools and attempted to sort out Navajo from Anglo values. In this last regard, some interesting generational differences turned up. Facilities such as laundromats, for example, were generally perceived as Anglo by older people, but as Navajo by the young.

A reasonably clear set of design directives emerged from the

The high school lounge (right), media building (below) and elementary school fireplace area (below right) echo shapes of traditional hogans (across page), but are crisp, contemporary.





The product of a fleeting moment in history.

survey's results. In general, the Ramah preferred the traditional hogan's polygonal or round shape to the rectangular, which they associated with Anglo buildings and more specifically with BIA schools. Similarly, they chose hipped over gabled roofs, since flat roofs were identified with the Pueblo style. Yet, more respondents wanted smooth surfaces that would weather well and represent the latest technology rather than the rough timber texture of the traditional buildings. And although hogans have no windows, the majority wanted them in the school, apparently to enjoy the vistas offered by the site and be in touch with the out-of-doors. There was also an emphatically stated desire that the buildings not be connected. "People had a strong perception that the children experienced nature, even if it was very hot or cold, while walking from building to building," says Hirshen. "This contact with nature, seeing and feeling it, was a very important issue." Although the Ramah considered some bright colors as all right, they preferred warm earth tones. They associated white with Anglo buildings and rejected it.

The survey results were translated quite literally into the architect's design. Brick was chosen for external facing for its ability to blend with the hill on which the buildings stand. The Ramah indicated a preference for the roofs to be blue, the color of the favored turquoise, to reflect the seasons, and so they do. In summer, the standing-seam metal roofs fade in the sun-bleached sky; in cloudy weather, they assume a complementary gray solidity; in winter, roofs and ground both disappear under the snow, leaving only dark pines and brick walls to identify the place. The volumes of the building are complex as were the preferred images in the survey. While the basic shape of the hogan is used in public spaces, the building is clearly contemporary.

The campus has now had five years of use. Some of the original goals of self-determination have been met; the school is largely managed—and operated—by the community. It is, in fact, the economic base of the community.

However, the major goals of the school's educational program—to produce teachers and graduates who are fully conscious Navajos equipped to succeed in the Anglo world as well—is still largely in the future. More generations of graduates are needed before the results of the program will be clear.

Nor can a definitive evaluation of the architecture be made at this time. The school is not without its critics. Some brand the high, airy volumes under the complicated roof planes "wasted space." Teachers complain that the irregularly shaped spaces designed for the sake of cultural appropriateness are hard to use.

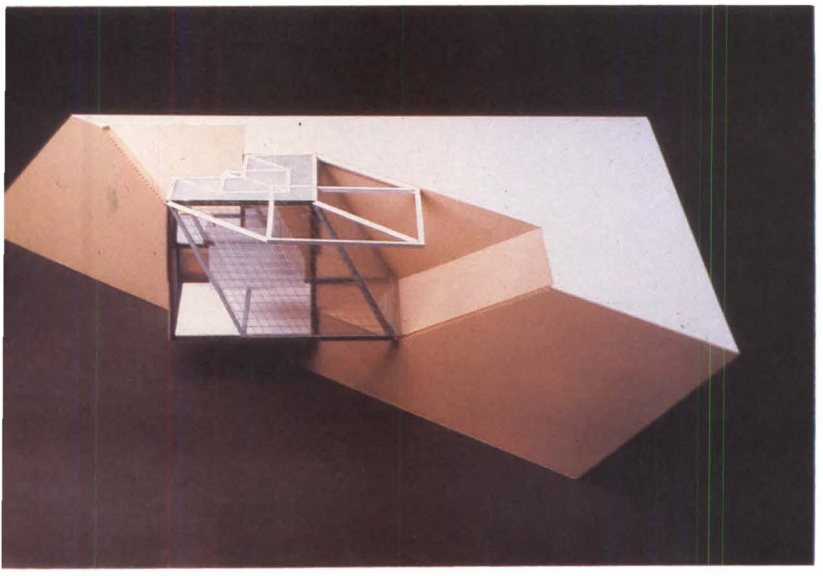
Other complaints are echoed in schools across the country: that open classrooms are noisy (the elementary school has double-sized classrooms with folding walls so that Navajo and Anglo teachers can be paired for bilingual education); that there is too little space and too much of what there is has been given over to administrative use. The latter is exacerbated by the

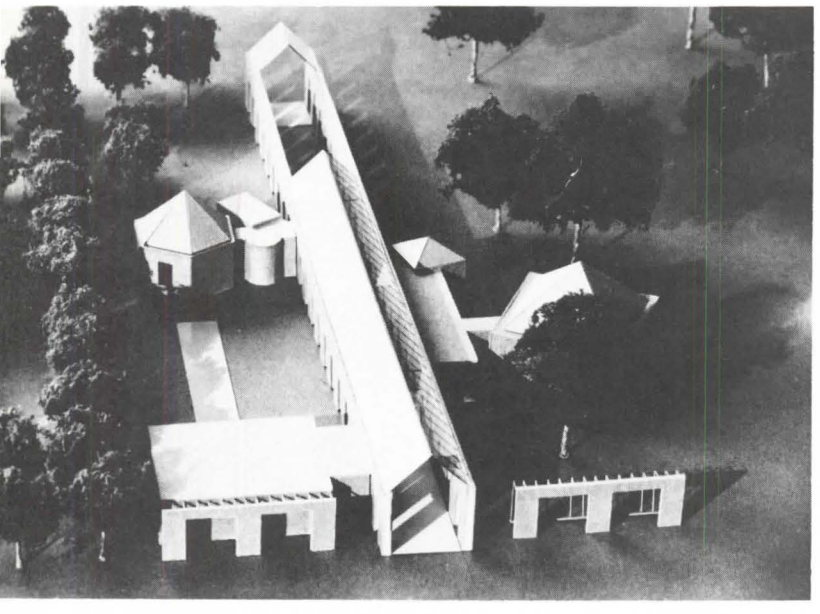
The Ramah chose a blue roof for their school. In winter, it is a soft, violet gray; in summer as bright as the sky.

fact that the kind of funding that built the first element of the campus is no longer available to finish it as it was planned. As Hirshen puts it, "Here was a group of people who were very tenacious and lucky to have the right allies and get a lot of money to control their own lives. But then their moment in history passed; the funds stopped coming in."

Having listened to a thorough airing of complaints, I was surprised to hear people sum up by saying that they thought it was a beautiful place and just what they wanted. Apparently, the comfortable fit of the buildings in the landscape, the pleasant, daylit interiors and the genuine sense of place add up to success in meeting the esthetic and emotional needs of the client community.

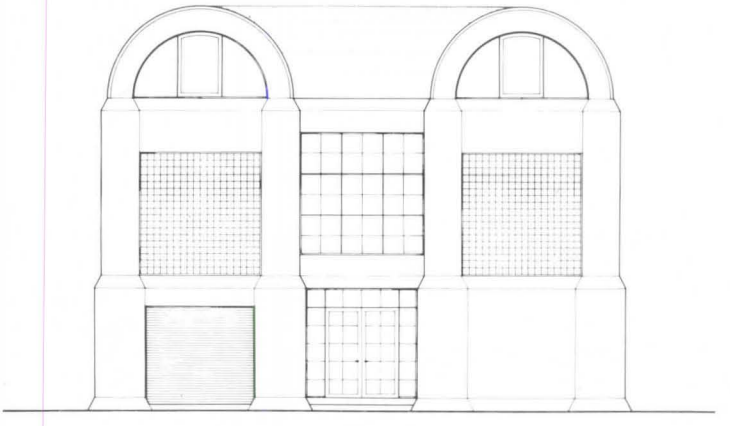
This and the very realization of the project, which sometimes seemed impossible to attain, give affirmation to the advocacy role in architectural practice sometimes dismissed as a fad of the '60s. □



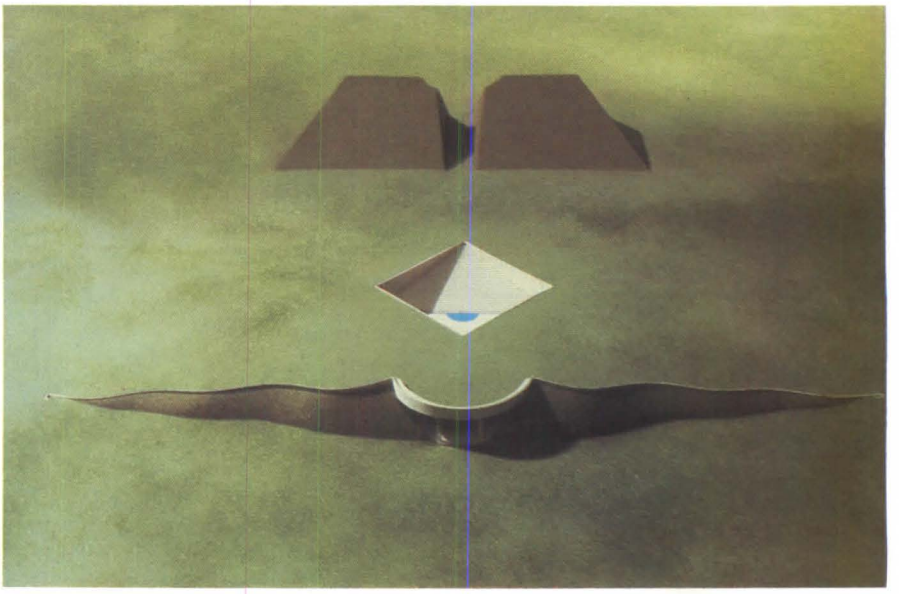


The Retreat into Architectural Narcissism

By Arthur Cotton Moore, FAIA



Clientless, siteless house designs from the Castelli Gallery 'Houses for Sale' exhibit, counterclockwise from top, by Emilio Ambasz, Cesar Pelli, Oswald Mathias Ungers, Peter Eisenman and, above, Arata Isozaki.



Illustrations courtesy of Castelli Gallery

There are discontinuities in current architecture more fundamental than the much discussed gulf between modernism and postmodernism. One particularly poignant gap is that between architects and society in general, and a result of this gap is that many important design issues have become, like ghosts, generally invisible to the architectural profession. Avoiding them, we have become preoccupied instead with some rather narcissistic exercises.

One such recent exercise began with no program, no site and no client. A group of eight international architects were each invited to design a prototypical family house, unemcumbered by any of the above, for an exhibit entitled "Houses For Sale." The suggestion was that a prototypical family could wander into the exhibit, see a design they fancied and commission the architect to take the design through to completion. More telling was that the drawings and models, the "instruments of service," were also for sale separately.

The introduction to the exhibit makes its motivation clear: "If one is willing to accept the premise, that like the other arts, the act of invention in architecture need not always wait for a commission to breathe it to life, then 'Houses For Sale' may be seen as using the method painters and sculptors have followed for a few centuries for the presentation of their work to the public. In doing so, 'Houses For Sale' removes some of the mystery and perhaps some of the anxiety from the initial phase of the architect-client encounter, while retaining the potential for amazement that can come from the revelation of an original work of art. . . .

"The involvement of an art gallery in this role is novel. For the first time, buildings are made available in a way formerly limited to painting, sculpture, graphics and photography, bringing architecture into the realm of contemporary art collecting."

But what was really being offered for "collecting," by getting rid of that last messy, anxiety-provoking contact with the reality of building—the client—was architectural presentation material as a fine art. Half of the architects obviously realized this and made the objects that hung on the gallery wall especially well suited to that wall: visually arresting, poetic, appropriately obscure, in short, quite arty. The visual quality of the presentations, even though somewhat convoluted, was often quite beautiful, and ensured that the show was a successful artistic event.

The voluntary truncating of the architectural process into stillborn architectural art by abandoning the reality of the client has been quite popular recently. The *Chicago Tribune* competition second phase drawings, for a competition that had already been won and for a building that had already been built and had even become a celebrated historic landmark, was a charming indulgence, but hardly a direct confrontation with the hard reality of America, fast becoming the ugliest man-made environment in history. Like the "Houses For Sale" exhibit, the new *Tribune* competition made a wonderful show of visual and intellectual explorations. Certainly, such exhibits are a welcome, stimulating addition to the architectural scene, but what is disturbing is the recent preponderance of deliberately unrealizable work designed under conditions absolutely assured to prevent any fruition, i.e., no client, buildings already built, etc., and the narrow conception of their proper subject matter.

Another such exercise was "Roma Interrotta" (see Jan., p. 49), which was based on the premise that 230 years of history had never happened. Relatively young, academically connected architects were given sectors of Giambattista Nolli's 1748 map of Rome and asked to come up with "urban intentions," not only with the intervening history missing, but also without regard to politics, economics, sociology, function or the Romans themselves.

The result, a sympathetic reviewer wrote, was to show that cities are resistant to a singular view, and that city development must be small-scale, incremental, responsive and contextual. In sum, the value of the exercise was that it showed that the basic approaches taken in "Roma Interrotta" were wrong.

Still another example was the Museum of Modern Art's exhibit of product showroom designs for Best Co. (see Feb., p. 50); it also employed the talents of some of our most published theorists and designers. All of them seemed to embrace the concept of strip architecture established by the SITE group: the idea that the artist's only way of saving his integrity when dealing with the strip commercial building is to make a joke of it.

Scornful humor is an old and durable defense mechanism against things overwhelming and threatening, like death and taxes. It is also the rejection response to anticipated rejection, e.g., I quit before I'm fired. So following along in the SITE tradition, the architects dealt with roadside commerce by trying to make a monkey out of it. This isn't done to something one is fond of. Indeed, what was expressed is an underlying hostility to the commercial world—the submissions suggest something of a rage against it.

The one idea suggested in the only submitted site plan was naive of the demands of commerce. What was proposed was the ancient Greek stoa. Not only does the notion of stoa fit comfortably with the revival of interest in classical allusion and design, but the stoa is one of history's few examples of a mythic commingling of commercial and intellectual pursuits, the sacred and the profane. Was not the stoa at Athens the birthplace of Greek philosophy, the hangout of Socrates, the place where ideas were exchanged as readily as produced?

However, the idea of adapting a stoa to a suburban strip demonstrates an innocence of contemporary commercial dynamics that not even the most routine broker would be guilty of. The resultant footprint suggests that either the site is infinitely expandable, thereby allowing one to get the requisite parking, service and square footage elsewhere or somehow in a long stringbean building, or that perimeter, not depth, is what one wants in commercial space (just the opposite is true), or that it is the parking lot, not the building, that makes money for the owner. To the commercial world this is the real joke. The expression of naivete and hostility by these architects must be symptomatic of something seriously wrong.

In addition to the put-down, there is also a flourishing of the put-on, the architectural super conceit, and the miniaturization of architectural horizons. In the last few years, many designs have been presented that depend absolutely on formalistically treated vegetation, from orchards to even large topiary that would take decades to achieve.

There are four basic perspectives on these various activities. The first maintains that this introversion is an aberration that will pass, largely brought on by the current rule dispensation (anything goes) of pluralism/postmodernism/apocalyptic watershed theory. Unfortunately, this position suffers from neglect of architectural history. Architecture always has contained a strong strain of work on or over the edge of lunacy and some of it has been remarkably durable.

The second perspective holds that a poetic, unfettered exploration in pure form enriches architecture with lyricism and fresh new directions. Above all, it asserts the role of the artist in architecture.

A third, and closely related, position is that, although creative investigations may not produce much architecture, their visionary conceptions will influence other architects and thus be multiplied. This casts the original creator in the role of a kind of researcher.

The basic problem with these two positions is applicability, or the lack thereof. It is hard to conceive how many of the small scale, well-publicized current projects can be employed in such tasks as the revitalization of a downtown or the taming of a suburban commercial strip.

There is also the issue of motifs. What we have seen picked

Mr. Moore is the principal of Arthur Cotton Moore/Associates, Washington, D.C. This is part of his book in progress to be titled *The Architecture of the Absurd.*

It must be art if it hangs in a gallery.

up most often is not the essence of a seminal project but its most idiosyncratic formal devices.

Is the creative architect a researcher or a doer? Since research often entails metaphorical removal to a clinical laboratory of the mind, does this not strip architecture of some of the integrity and validity that stems from specific creative response to a specific site, program and set of constraints?

A fourth camp of opinion might read in these phenomena that the gulf between architectural inquiry and general society's concerns may be at an all time high (or low, depending on one's point of view).

Compare, for example, two selections from recent writings about architecture. The first is on Alvar Aalto by Demetri Porphyrios, in an *Architectural Design* monograph. "Thus, if homotopia was an ordering sensibility growing out of its own devotion to link, and by linking to guarantee continuities, hetertopia will now grow out of the predilection to always circumscribe the autonomy of every ordering gesture, while, by assuming the ever-changing criteria of an aphasiac, it will always refuse to relate. Withdrawn into their own suzerainty, the two theaters of the Finlandia Hall, the linear repetitions of offices and preparatory rooms and the empty expanses of foyer space, remain motionless, yet quivering in outlines, fragments and pieces."

And now compare Richard Swesnick, developer, in his popular work with the melodious title *Investing in Income Producing Properties:* "There are a few important things to remember about the selection of your architect. In the first place there are two broad classes of architects: institutional and speculative. Developers use these terms, not architects. Just remember that an institutional architect is rarely into what anything costs. Institutional architects are the same architects that win all the architectural awards (the judges are mostly institutional architects). A test is this: If the architect has won many awards—don't hire him. *Award-winning buildings have a propensity for losing money. The only loser I ever had won an architectural award!*"

Now, to most architects, Swesnick may appear to be an abomination, and he would readily return the compliment, but the important element is that this unequivocating point of view comes from a large developer who has in fact caused major portions of a city to be built, and that the vast majority of the real estate development-construction industry fully subscribes to his position.

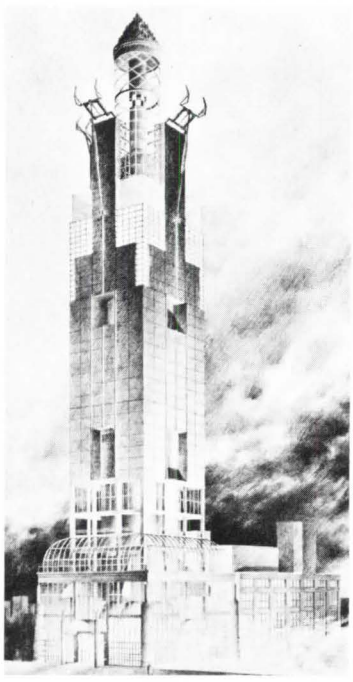
Meanwhile, overintellectualization becomes pedantic and diverts architectural attention from what must be an ever deepening sea of silence—the conversation between architecture and society. And while the profession has its microscope on a few interesting houses and is limbering up theories and vocabularies, the real world is being designed by businessmen, builders, politicians, lawyers, bureaucrats, administrators and citizen groups —everyone but architects.

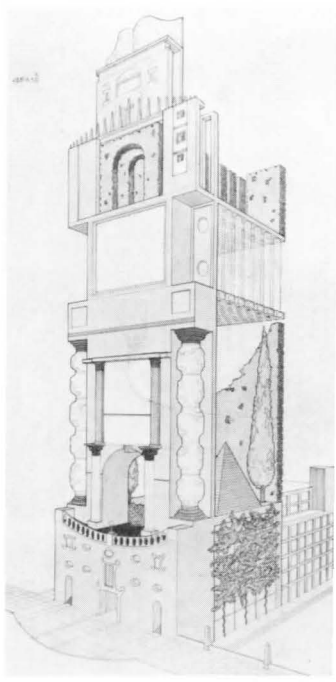
One failure of the present architectural posture is its neglect of the wellspring of most architecture. At the risk of offering a crass observation, it should be pointed out that in many cases the activating purposes of a building is not to allude to Mr. Soane (postmodern) nor even to house people (modern), but simply to make money. Standing at almost any typical street corner, one is surrounded by buildings that would simply not be there if at some time they did not appear to someone as a good investment. The test of economics extends beyond commercial architecture. Besides housing functions, university buildings must contribute to the attraction of students without whom the school would fold; religious structures must assist in attracting sustaining congregations or expire; institutional buildings must justify their economic benefit to the membership, and governmental structures must almost always be justified with market comparables to the appropriating assemblies. Only the single-family custom house, a favored building type, is occasionally excused from these rigors of economics, although it too must offer resale value.

Like Victorian society rejecting the libido, architecture is rejecting a very basic primitive drive. Much of postmodernism is clearly a helpful gesture toward a society turned off by the sterile intramural sport of modern architecture. But more telling of architecture's relationship to society is its economic estrangement. Matching society's colossal indifference is the new phenomenon that architecture is becoming popular, albeit in a backhanded way. The politicization of architecture as a by-product of the environmental and antidevelopment movement provides at once a potential new patron of architecture and a possible basis for a real constituency.

In the past, architects were at least rhetorically up to new challenges. Take, for example, Romaldo Giurgola at an AIA seminar in 1966: "This architecture is an art expressed in reasoned spaces, and, like all art, it becomes a guide to social and technological changes. To study architecture is to learn how to translate life into form, which in turn affects life in an enduring cycle."

In contrast to this heroic stance, we now find a preoccupation with semiotics as one of the pivotal concerns in much of the





Chicago Tribune *competition* Late Entries *from the book by Stanley Tigerman (Rizzoli, New York City, 1980): designs, left to right by Fred Koetter, Frank Gehry, Judith Di Maio, Thomas Beeby, Arquitectonica (Bernardo Fort-Brescia and Laurinda Spear), Edgar C. Haag and Peter de Bretteville.*

glutinous prose that architects are now producing faster than architecture. Buzz words abound: typologies, bricolaged, syntactic, oneiric, anastrophae, phalanstery, metonyme. There is an explosion in architectural writing and discourse.

Add to this the explosion of architecture as an art gallery phenomenon wherein an architect's study sketches are sold as works of art. Gallery owners dealing with architectural "art" say the market for what was once considered only a means to an end and, after the study phase was over, absolutely worthless study sketches, is small but growing. It is interesting that the more painterly the exhibiting architect is, the more two-dimensional his work; the more visionary—in sum, the more removed from built architecture—the better it sells.

Architecture was always contaminated by functionalism and practicality of the most mundane sort (toilet locations) and therefore was always suspect as an art. What surer way to become a fine art than to make that single art-defining gesture simply of being placed in a gallery? Following on the acceptance of photography as a gallery fine art, architecture can now be a whole part of the Saturday cultural gallery pilgrimage and Sunday press critical review. This may explain our increasing preoccupation not just with novelty, but also with the outrageous, the extreme, the diverting, the changing fashions always so important to the art world. We not only want to theorize and search for ever more arcane geniuses, but need to invent the complex discourse that requires important and employed interpreters. Third generation Schindlers become exciting footnotes.

To the extent that postmodernism opens up choices, allows for richer inclusions, broadens the esthetic base of the syntheses between new and old, it must be seen as a liberating agent. Self-imposed blinders come off. The bad news comes with another part of the so-called revolutionary rhetoric, and that is a rejection of the societal involvement of architecture. Overly reacting against the flamboyant claims and panaceas consistently offered over the past 50 years—the claims that architecture could cure everything from poverty to hives, "we shape our buildings and then they shape us"—postmodernists tend to reject any social, political role for architecture. This is a singular retreat. It is as if having boasted of fantastic power to a world who turned a deaf ear, architecture has gone into a corner to suck its thumb. Surely the grandiose posturing was pathetic and itself an indication of the gulf between architecture and reality, but the wrong lessons are being drawn.

In the rediscovery of the Beaux-Arts what is being loved is the elitism, the removal from general society. It must be remembered that the projects that were so beautifully drawn ranged from a monumental congress hall for a small republic to a pavilion whose sole purpose was simply to end an axial view. There is little demand for either building today.

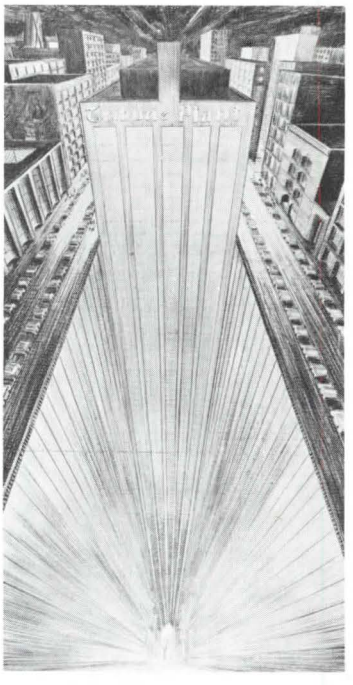
The elitism, the rejection of any societal role, is another manifestation of the rampant academic mandarinism afflicting architecture today. Although greatly enriched by new eclecticism, architecture's self-denial of involvement in society is leading to architectural masturbation, and potentially to architectural suicide. Why is there this durable gap between society and architectural creativity, and what does the flourishing of fanciful anti-economic work tell us?

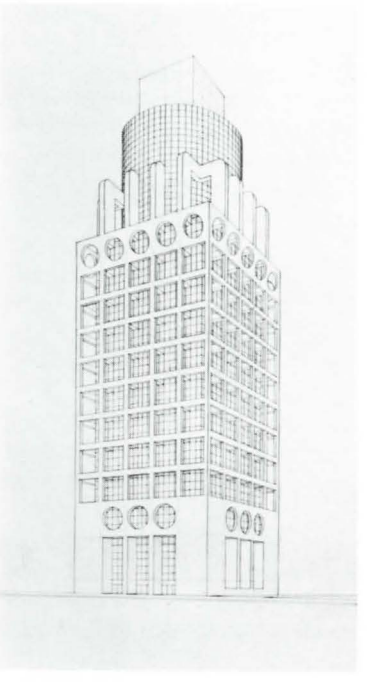
Is it a revolt, or a revulsion, to the incredibly restrictive realities of the profession, a rejection by the only profession trained to deal with them, of the physical problems of society, a feeling of impotence to deal with the broad range of perhaps insoluble problems of cities? Is it the nature of the profession?

Or have the built-in stepping stones of the profession produced a narcissistic impasse? Christopher Lasch *(The Culture of Narcissism)* agrees with the possibility.

A concise notion of narcissism is the concept of a people "opening their arms" to a world that eventually rejects them. Being rejected, they in turn close their arms and their concerns from that world, become "divided from the world by a violence they are desirous of committing upon it" and turn their concentrations on an infinitely smaller world, one they can be sure of controlling and, indeed, shining in. That smaller world can be one's self, or one's architecture. It is probably safe to assume that most graduating architects approach their new profession with "open arms" and a certain amount of enthusiasm; also safe is the notion that most architects at least start out firmly believing they are "designers," the very word implying "good," such that they will make a sharp dent in the esthetics of architecture.

Jesse Hickman





In five or more years of architectural education, almost all of a student's testing is on design issues. Consider his shock that the world (probably including the office he works in) is not so interested in his layering of planes, the depth effect of his coloration or his witty allusion to some dead architect.

The rejection period starts to set in when the young architect compares his salary to his just graduating cousin's, who happens to be a doctor, lawyer—or worse, a business school graduate. It continues if he works for a firm organized on a very structured basis, that allows him the opportunity to do stair details all day.

It takes on special impact if he works for a recognized design firm, which, in his opinion, fails to appreciate his superior design talents and rejects his proferred design suggestions.

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BOOKS

Two by Jencks: The Tough Life Of the *Enfant Terrible*

Late-Modern Architecture and Other Essays. Charles Jencks. (Rizzoli, $32.50 hardbound, $22.50 paperbound.) **Skyscrapers-Skycities.** Charles Jencks. Rizzoli, $12.50.)

The life of an *enfant terrible* is tough—I know, I used to be one. Quite apart from the constant pressure to be more and more terrible (or infantile), there is the certainty of being over-run from behind by younger and more terrible *enfants* before you've had the time to enjoy the role. This is widely believed (among close watchers of the game) to be the impending doom of Charles Jencks, the Man Who Gave You Postmodern.

If it hasn't happened already, that is. Martin Pawley, once a promising London *Enf. Terr.* and now at Florida A & M University, Tallahassee, clearly believes that Charles has already been overwhelmed by the all-new British antimodern polemicist, David Watkin of Cambridge, author of the sternly sententious *Morality and Architecture* (see Oct. '78, p. 88). Now, it may be that Watkin's relentlessly holier-than-thou approach is the true wave of the future, as against Jencks' love-it-all pursuit of the new, but need the wave of the future insult its predecessor by breaking over Jencks as if he weren't there? As Pawley pointed out in the London weekly *Building Design* (Sept. 19, 1980), Watkin does Jencks the monstrous affront of not even mentioning him in *Morality and Architecture,* and doesn't even mention him again in a subsequent book.

No *enfant terrible* reputation can stand that kind of stuff for long, but before we write off Charlie as a beached whale on the shore of the '80s, let us look at his two recent books and see how the matter really lies. *Skyscrapers* is one of those pretty picture books (like his earlier *Daydream Houses of Los Angeles)* which no amount of learned prefaces can save from its own pretensions. In the acknowledgements section, Jencks refers to the illustrations as "slides," and that's the truth of the matter—like Venturi's *Complexity and Contradiction,* this would have been a knockout guest appearance slide-lecture, a giggle an image, a couple of profound style thoughts to take home with you and a pocketful of buzz words (skypricker, skywedge, skytube—even skyjump!) with which to louse up office conversations the next morning.

Late-Modern Architecture is a different product, a recycled collection of critical essays from former times. Such re-collected works can often turn out embarrassing, because words uttered in the heat of argument, or in the joy of discovery, can easily go stale if kept overnight—and, worse, will smell fake if the author tries to update them. In the case of *Late-Modern,* however, this slightly dated flavor is as salutary as it is informative, because it serves to remind us what the '70s (near enough) were really about.

However hard Jencks and his academic cohorts may have tried to convince us, and themselves, that the '70s were going to be all "postmodern" (a phrase which Philip Johnson coined and forgot in the early '60s) a simple accounting of square feet and green dollars will show that it wasn't so. This book is full of Pei, Portman and Pelli; Lumsden, Lasdun and Bunshaft; Johnson, Johansen and Roche; Piano, Rogers and Foster; Saarinen, Yamasaki and Breuer, and so on and so on and SOM. Jencks' postmodern admirations are there as well—Kroll, Krier and Koolhaas; Stern, Stirling and Superstudio; Hejduk, Hertzberger, Hollein—but overwhelmingly this book is about the Conservative Establishment in Modern Architecture because they are the people who get things built and these essays were mostly occasioned by completed buildings,

not semiotic theories (as in his *Post Modern Architecture).*

These buildings—the Transam pyramid, the Dallas Hyatt (facing page), Centre Pompidou, the Hancock Tower, IDS Center, One UN Plaza, Boston Public Library extension, Pacific Design Center, the Hirshhorn Museum and other solid lumps of real estate—are what actually happened in the '70s. It is not younger *enfants terribles* who have over-run Jencks from behind; it is the march of history. His writings on postmodernism must now be seen as propaganda for what he—and other overbred academic talents—believed *ought* to be happening; *Late-Modern Architecture* is an account of what *did* happen.

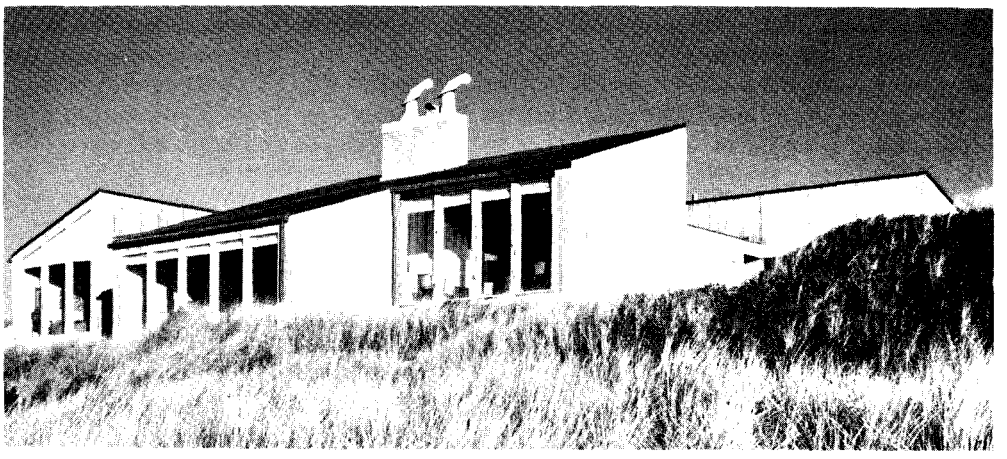
Furthermore, if Jencks really believes what it says on the back of the dust jacket: "Late-Modern has now become one of the most important contemporary architectural movements," then that is as good as admitting that he and the postmodernists goofed on the most crucial point of their argument, and modern architecture did *not* "die in St. Louis, Missouri, on July 15, 1972, at 3:32 P.M." when they fired the dynamite under Pruitt Igoe. Modern architecture is alive and well (if "Late") and living in Citicorp Center!

Does this mean that Charlie is now just a busted prophet? Far from it; he is by preference an instant commentator on current events, an addict of novelty, a compulsive trend-spotter, a historian of what happened between his last two heart beats. In a ponderous and slow-moving art like architecture, anyone who is tolerably up to date is apt to be mistaken for a mad visionary by the 99.999 percent of the profession who did not have this morning's brainwave. Much of what he said first needed saying anyhow, and he occasionally gave himself time to do the research before saying it.

And every word of it was said by a man who loves architecture and gets his main kicks in life from talking/writing about it. Not the same kicks as yourself, devoted slave of the drawing board, because he never completed his architectural training nor took his professional examinations. Neither warped nor illuminated by those long nights in the studio and endless hours in the lecture hall that helped to "socialize you into the subculture of architecture," Jencks views the game from the sidelines and, therefore, proverbially, sees more of the game than you do. That is why he spots the trends and names them even before anyone else knows they are trends.

Of course, it is irritating to discover, when you thought you were just doing an honest job for your clients, that you were accidentally pioneering Supersensualism or Elliptical Grids or Slick-Skin or Oxymoron. Almost as infuriating as it is for me to discover that the only direct quotation from my writings in *Late-Modern* is wrong! Still, "Get it right, Charlie" is an old song now, and none of us is perfect, and he will almost certainly write a stiff letter to the editor pointing out that he has been misinterpreted again—or perhaps he won't this time, because he really doesn't need to be so nit-pickin' paranoid about his reputation any more. He is one of the fixed stars of the critical firmament now, almost certainly doomed to receive an AIA medal and—dammit—he's 42!

Reyner Banham, University of California at Santa Cruz



Contemporary Homes of the Pacific Northwest. Text by Harry Martin; photographs by Dick Busher. (Madrona Publishers, 2116 Western Ave., Seattle, Wash. 98121, $30.) This book contains a selection of contemporary houses "that, together, represent the purpose and spirit of the Pacific Northwest style of architecture." The 32 houses, briefly described and handsomely photographed, are in northern Oregon, Washington and southern British Columbia. According to Harry Martin, "Architects throughout the Northwest, on both sides of the border, have all been exposed to the same influences: empathy for Wright, the Greene brothers and Warren Callister; rejection of the Bauhaus, the International Style and the ateliers of Walter Gropius, Mies van der Rohe and Le Corbusier." The architects who express the Pacific Northwest style are "ingenious and inventive" in finding solutions to site, form, plan and style choices "that range from elegant formality to Spartan simplicity." Above is a weekend house, designed by Norman C. Zimmer, FAIA, of Portland, for a Portland family.

How Buildings Work: The Natural Order of Architecture. Edward Allen. (Oxford University Press, $19.95.)

This book tells what a building does, and how it does it. The author compares the work to an introductory book on physiology that summarizes the structure and function of the human body. It is well written, attractively illustrated with line drawings, handsomely put together—and offered at a price that is low by today's standards.

In the first section on what buildings do, Allen compares the outdoor environment with the environmental requirements of people. A building is, functionally, what we expect it to be, he says. For example, among the 13 things that he lists as what we expect are the provision for the immediate necessities of human metabolism, the creation of the necessary conditions of human thermal comfort, the ability to protect its own structure and to provide reasonable protection and the capability of being maintained in a useful and economic manner.

Some of the expectations are a result of human needs, Allen says, but others arise from the needs created by the building itself. "A structural beam, for example, is not related in a primary way to the solution of any human need. It is a secondary device which supports a surface . . . which is of primary importance to the users of a building."

Allen discusses the expectations in the major part of the book, which explains how buildings work. Chapters are devoted to such subjects as the recycling of wastes; the provision of thermal comfort; the control of heat radiation, air temperature and humidity, and the provision of structural support.

Allen concludes: "This book has outlined the natural order of physical function in buildings. Architecture has other important functions, too—each building serves an economic function, justifying its existence in dollars and cents, and a symbolic function, evoking emotions within those who experience it.

"But these are the province of other books. Here the message is simply that the scientific fundamentals of a building are always the same. A house of snow in the Arctic obeys the same physical laws as one of bamboo in the tropics, and a steel-framed skyscraper is not so far removed from a treehouse as we would sometimes believe."

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Books *from page 51*

Designing for Therapeutic Environments: A Review of Research. Edited by David Canter and Sandra Canter. (Wiley, $35.)

The contributors to this volume are unified in the quality of feeling that they bring to their research efforts, a linkage far more impressive than employing common statistical techniques that allow comparable analysis of data. Perhaps the underlying suggestion of the book is that all that is needed to alter our attitude toward environmental design is to confront the issue of "caring" for one another.

Therapeutic institutions play an undeniable "caretaking" role. We have come to talk about care with a certain dullness of spirit, as teams of nurses, house parents, therapists, teachers and other monitors, supervisors, planners and providers minister institutional remedies to their charges. These are vintage expressions, last vestiges of a dying breed of segregated professional roles that made past institutions look like factories for the improvement of human performance. In their effort to be functionally efficient, older institutions forgot to attend to the quality of experience they were creating for both those cared for and their caretakers.

Ultimately, what led to these utilitarian solutions was a general societal euphoria with the machine, and impatience with deviance and misfits. Contemporary institutions follow the simple line of providing for basic human contact, creating settings where people can sit with one another, listen to, hold, touch and be touched by one another. There are no glib solutions through which deeply ingrained notions of "sickness" can be reversed through cosmetic modifications of the environment to make it look "normal." All the contributors to this volume have grappled with this issue and, in the end, for every solution they have attempted, studied and painstakingly evaluated, they each arrived at one common conclusion: "It's more complicated than that."

Rivlin and Wolfe in a remarkable study of a children's hospital over a six-year period tracked assumptions regarding use of different spaces and compared them with *actual* uses. In the end and despite all the planning, a simple change in administration of the hospital can have powerful consequences for the way the environment is used and "so-called bureaucratic efficiency needs take precedence over therapeutic needs." The physical form of the building is not enough by itself. Rivlin's and Wolfe's studies clearly demonstrate that it is easy to gradually slip into an institutional mode of life. "Despite its vaunted experimental and progressive intentions, the institution constantly reminded its clients that they were viewed as totally inadequate by the staff."

Mazis and Canter point out some important links between buildings and the organizations they house. "It is not being suggested that by changing the door knobs or putting the kitchen in a more accessible position that management practices will also be changed." In smaller institutions the staff is able to be more child-oriented. Twenty institutions for mentally retarded children were studied and compared on very simple physical dimensions, such as proximity of kitchen to living areas, size and quality of sleeping spaces and ease of control over the environment. While the researchers deny any simple environmental determinism, observations show that the staff feels sanctioned to act "caringly" in smaller settings and is more remote and impersonal in larger institutional settings.

The book goes on to present research on psychiatric hospitals, therapeutic environments for the aged and acute general hospitals. What is remarkable about the work is the commonality about these disparate settings. Each offers the opportunity for examining architecture as a "frame" for a caring relationship among organizations, people and their surroundings.

If anything is left out of this book, it is the recognition that we can try new scripts on old environments. When we enter the museum gallery under the eye of the guard, our body is telling us, "I'm afraid I'm not going to do a good enough job of visiting this gallery, and you will be disappointed." Parallel inner thoughts occur in concert halls, hospitals, schoolrooms, offices. Overconcern with the environment can cause us to disguise or ignore the "performance fears" or "performance manias" that make us feel we have no choice but to enact the script that suits the scene set by the environment.

I am reminded of the small child frightened of sharp objects, who shares a dream with her father of a world in which there are "only butter knives." Just this acknowledgment of her phobias and fears drains away her need to act on them, and a new set of relationships is established for the previously fearful environmental elements. The focus on therapeutic environments should not be lost. Ultimately, all people in distress are trapped in their own anxiety. The environment plays a role in adding to or diminishing their anxiety. The remedy in the end is human communication.

Designers of all therapeutic environments from psychiatric wards to medical hospitals to elderly housing complexes will find this book friendly in foraging for ideas and perhaps even a clearing in the forest. The book lays out in its collected readings the best efforts of U.S. and British social scientists to infuse new habitability standards into institutions otherwise known for their insensitivity and inflexibility. This book offers no panaceas. In fact, its virtue is that it lacks the "theoretical overview" so common in the "Popular Mechanics" attitude of many environmental psychology books. *George Rand, Associate Professor of Architecture and Urban Planning, University of California, Los Angeles*

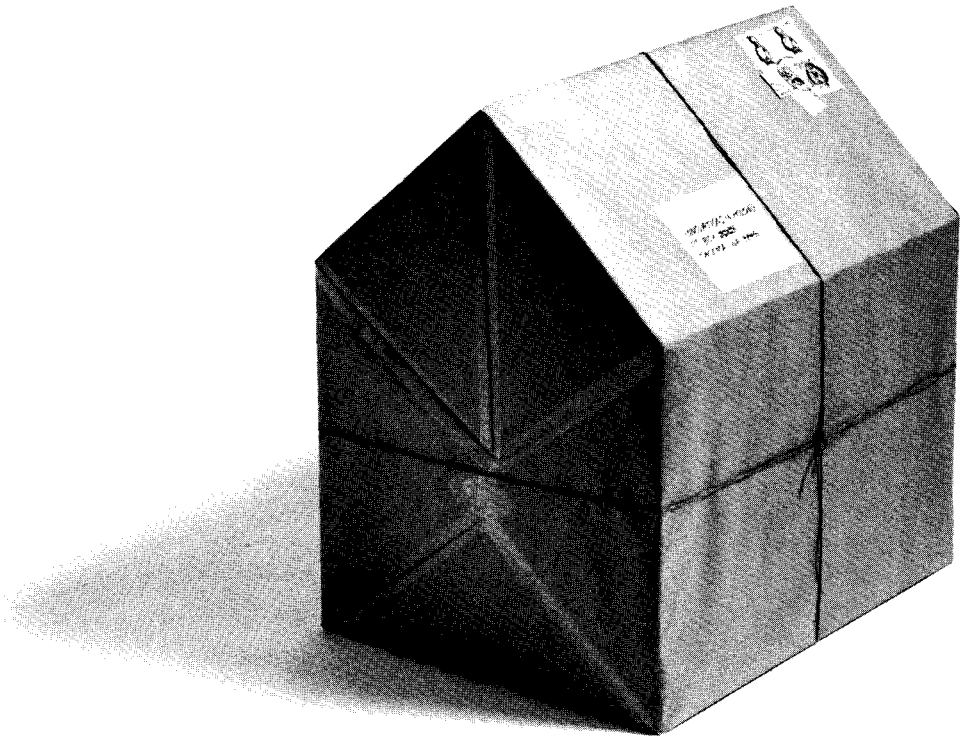
Wells Coates: A Monograph. Sherban Cantacuzino. (Gordon Fraser Gallery; distributed in this country by ISBS, Inc., Box 555, Forest Grove, Ore. 97116, $29.95.)

This is an account of the life and work of Wells Coates (1895-1958) who was brought up in Japan, educated in Canada and went to London in 1922 to become one of the best-known industrial designers of his time. He had a passionate interest in technology, furniture design, electric heaters, clocks, boats, radio and television sets. Name it, he was eager to try anything new. Most of his executed architecture dates from the decade preceding World War II, a period coinciding with the rise of the English modern movement in which Coates played a leading role. He is best known, perhaps, for the Lawn Road flats in Hampstead, London, one of the pioneering works in International Style architecture of the 1930s.

Cubism in Architecture and the Applied Arts: Bohemia and France, 1910-1914. Ivan Margolius. (David & Charles, North Pomfret, Vt. 05053, $26.50.)

The cubist trend in architecture to appear in the Austro-Hungarian Empire (now Czechoslovakia) and part of France before World War I was a reaction against 19th century materialism and the functionalism taught by Gottfried Semper and Otto Wagner, says Margolius. Cubist architects "rejected the rationalism and utilitarianism that was based on renaissance theories and tended toward the late Gothic and late baroque composition." Because cubist architects had little regard for practical uses of their work, or for structural law, their projects were mostly unrealized. Yet, Margolius says that their efforts to interpret cubic art into a three-dimensional framework is important to architectural history. The movement was short-lived, but it anticipated modern architectural form and the development of technology and industry through its "originality, theoretical background and perfect execution." Margolius says it seems incredible that buildings born in the style that started the modern movement "have been entirely missing from all the truly historical accounts."

In brief essays, he also discusses such topics as the influence of cubist paintings, cubist theoretical writings and cubism in the applied arts. □



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Government *from page 14*
sidered small business enterprises, defined as an architectural firm whose annual gross receipts average $2 million per year or less over the last three fiscal years. A small engineering firm is one with annual gross receipts averaging $7.5 million per year for the last three fiscal years.

A GSA spokesman said that architectural services for construction under $2.5 million is mainly for renovation work. And he said the new provision will increase small firm participation by about 5 percent and decrease participation of branch offices of firms with higher total gross receipts.

The rule also says that "every proposed procurement for construction, including alteration, maintenance and repairs estimated to be in excess of $2,500 and under $500,000 shall be considered individually" as to whether the contract will be set aside for a small business. Further, the PBS commissioner "has unilaterally established a class set-aside" for small businesses in the procurement of construction estimated to cost between $500,000 and $1 million."

Preservation Tax Incentives Receive Support in Hearings

At federal hearings in San Francisco, Chicago and Boston on legislation to extend historic preservation tax provisions, many argued for incentives, while support for tax disincentives was mixed.

At issue are provisions of the 1976 Tax Reform Act that allow owners of a substantially rehabilitated certified historic structure (those listed on the National Register of Historic Places) to use the same accelerated methods of depreciation available to the owners of newly constructed buildings.

The law also allows amortization of rehabilitation costs over five years rather than over the remaining life of the structure. These provisions will expire on June 15, 1981.

Disincentives for demolition and substantial alteration of historic buildings are also contained in the 1976 law. The cost of demolishing a historic structure must be capitalized and added to the value of land on which the structure was located. The law prohibits the use of accelerated depreciation in connection with any new building built on a site where a certified historic structure has been razed or substantially rehabilitated in a manner "inconsistent with the preservation of the historic character of the structure." These will expire on Dec. 31.

The benefits to historic preservation resulting from the 1976 act was summed up by Stephen L. Taber of the Californians for Preservation Action: "The historic preservation provisions of the Tax Reform Act of 1976 constitute a firm step away from a tax policy which encourages waste and destruction of our architectural resources and, instead, promotes the renewal and reuse of older buildings, bringing with it energy efficiency, revitalization and job creation in central city areas, and a heightened appreciation of the rich architectural and cultural heritage of our communities."

The Department of Interior's Heritage Conservation and Recreation Service has, as of September, approved 1,800 rehabilitation projects valued at more than $875 million. In a sampling of over 300 owners of certified rehabilitation structures, 50 percent of the owners indicated that their projects would not have taken place without the availability of federal tax incentives. The department supports a one-year extension of the provisions, during which time they can be reviewed by the new Administration.

Others, such as Californian Dan Peterson, AIA, support a longer extension of the tax provisions. Calling for a five-year extension, he said, "With the economic situation and financing the way it is, projects are now being delayed and owners will not be able to take advantage of the benefits unless the provisions of the tax reform act are extended."

Other comments in favor of extension of the tax incentives follow.

"With the passage of the Tax Reform Act of 1976, we have witnessed a dramatic increase in public awareness of the economic, social and cultural benefits which can be obtained through quality rehabilitation of historic commercial buildings for compatible contemporary uses," said Paul Bradford, of the Western office of the National Trust for Historic Preservation. "The availability of historic preservation tax incentives has enabled preservationists to work directly with business and financial leaders to develop creative and economically viable uses for old buildings."

"Without these incentives for rehabilitation, developers will choose new construction and we will return to the pre-1976 era which was characterized by wholesale demolition of historic structures," said Michael Joseph Connolly, Massachusetts secretary of state.

"Beyond doubt the incentives are accomplishing the intent of Congress to spur revitalization of our older significant buildings," said St. Louis Mayor James Conway, representing the U.S. Conference of Mayors.

But Conway criticized the disincentive provisions, calling their effects "largely negative." Ellen R. Ramsey of the Foundation for San Francisco's Architectural Heritage agreed and blamed the disincentives for nuturing "a movement for owner consent prior to listing of properties in the National Register of Historic Places. . . . The disincentive appears to buy little or nothing in the way of protection." Ramsey was referring to the Historic Preservation Act Amendments of 1980, passed by the House Interior Committee, that would require the consent of any owner of a historic property before the property could be listed in the national register.

Questioning both the tax incentives and disincentives was the Treasury Department spokesman. While stating that the department is "not opposed" to an extension of the provisions, he suggested that the tax system "now favors rehabilitation and preservation and discriminates against new construction."

Alaska Bill Clears Congress; to Set Aside 104.3 Million Acres

On the second day of Congress' lame duck session, the House adopted the Senate version of the Alaska lands bill designating 104.3 million acres as national parks and conservation areas and wildlife refuges. President Carter expressed his approval of the House action, calling the bill "the greatest land conservation legislation of the century."

The passage of the bill ended, for the moment at least, a four-year battle between the House and the Senate. Led by the interior committee chairman Morris Udall (D.-Ariz.), the House had passed in both 1977 and 1978 Alaska lands bills that more strongly protected the environment, while the Senate's version, passed in August '80, allows for more oil and mineral development. The House version called for a total of 127.5 million acres of which 67.5 million would be designated as wilderness areas. The Senate version calls for 53.8 million acres of wilderness areas.

In adopting the Senate version, the House was essentially "bowing to the new political realities." However, Udall warned that "accepting it doesn't mean the Alaska job is done. We intend to correct the deficiencies in the next Congress."

The 104.3 million acres of Alaska land (larger than the state of California) represents 28 percent of the state's lands, doubles the national park and wildlife refuge acreage in the country and more than triples the amount of designated wilderness lands. The law calls for 43.6 million acres of new national parks, 53.8 million acres of new wildlife refuges, overlays of 56.7 million acres of wilderness protection on various conservation units, a 2.3 million acre national monument in the Misty Fjords area and a 921,00 acre national monument in the Admiralty Is-

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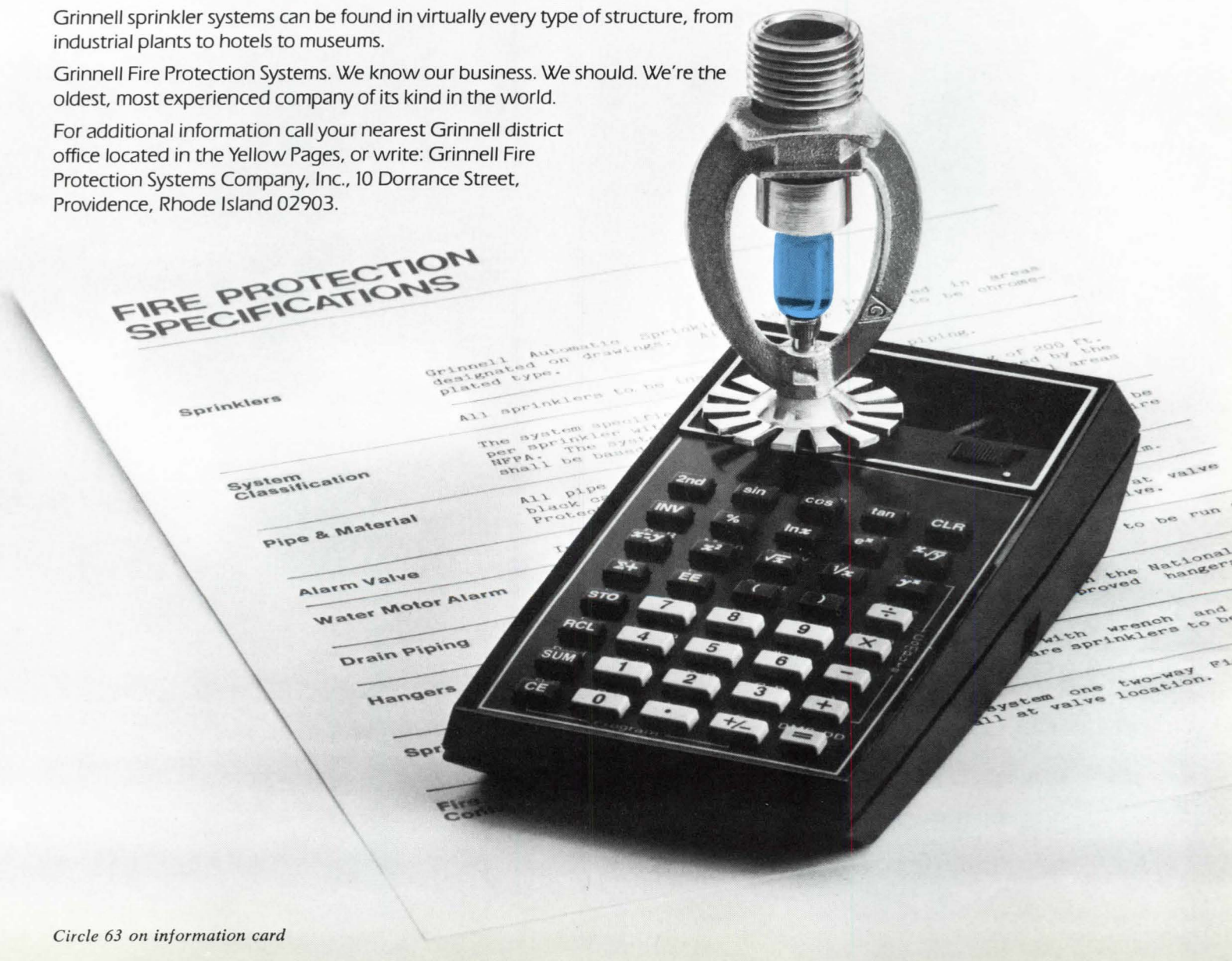

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Government *from page 54*
land area, among other things. It also allows seismic exploration for oil and gas on 900,000 acres in the western coastal plan of the William O. Douglas arctic wildlife range, the breeding ground of the continent's last large caribou herds.

Also in the law is finalization of Alaska's selection of 98 million of the 105 million acres that the state is to receive under its statehood act. It also guarantees the conveyance of 44 million acres to Alaska's natives.

AIA supported the original House version because it provided for "adequate continuing planning, classification and control of Alaska national interest lands based on sound knowledge of the natural environment and resources," and protected "land subject to damage and preserves lands of primary wilderness value for continued future use and appreciation of all peoples."

Rail Capacity to Transport Coal Feared Lacking for 1990 Needs

"The National Energy Study," a 285-page report recently released by the Departments of Energy and Transportation, analyzes the changing transportation patterns that will occur by 1990 as the nation shifts from oil to coal and continues to search for new sources of oil and gas. It identifies trends and major transportation corridors for the transport of coal, petroleum, natural gas and nuclear materials. The "most important finding," according to the report, is "the potential shortfall in the capacity of the nation's railroad system as it now exists to move the 1990 predicted coal traffic," especially from Western states. The study concludes that major investments to increase the capacity of the nation's transportation system will be required to meet energy needs by 1990.

Patterns of energy use are projected for 1990. In 1975, the nation consumed 73 quadrillion BTUs of energy; the study says this will rise to 104 quadrillion BTUs in 1990. In 1975, 45 percent was for oil, 21 percent for coal, 28 percent for natural gas and the remainder came from nuclear, hydroelectric and other sources. By 1990, coal's share of BTUs is to rise to 30 percent, oil use is to drop to 39 percent and natural gas consumption is to fall to 19 percent.

Such changes would force adjustments in transportation patterns, as would the regional shifts in the production of energy sources. Coal traffic from Western states is expected to increase from the level of 97 million tons in 1975 to 625 million in 1990. Although Appalachian coal traffic is predicted to almost double the 1975 level by 1990, reaching 600 million tons, it is expected to grow at a slower rate than coal production in the West. Other regional shifts in production of energy and the effects on transportation are envisaged, such as the rise in Alaska's share in oil and in natural gas production, with the Gulf states' share in both energy sources falling.

Generally, domestic shipments of all energy sources are expected to be made over longer distances in the future, with increasing use of currently underutilized facilities and traffic dropping off in others. Due to geographic constraints of waterborne coal traffic and the time required for the approval and construction of coal slurry pipelines, continued heavy dependence upon railroads for transportation of coal is foreseen.

The report says that the transportation industry is gearing up to increase energy transport capacity and that actual construction is not seen to be a problem in most instances. But there are many other matters to be resolved, including financial, environmental, social and safety considerations, which often involve government regulations.

Three U.S. Sites Nominated For World Heritage List

The Department of the Interior has selected three properties for proposed U.S. world heritage nominations for 1981. They are Mammoth Cave National Park in Kentucky, which has 215 miles of interconnected underground passages and is the most extensive cave system known; Olympic National Park in Washington, an area of diverse topography where the rare Roosevelt elk is found and which contains the finest remnants of Pacific Northwest temperate coniferous rain forest, and Wright Brothers National Memorial in Dare County, N.C., where the first sustained flight in heavier-than-air machine was made on Dec. 17, 1903.

The nominations are for the world heritage list, which has been ratified by the U.S. and 49 other countries. Natural and cultural properties throughout the world considered to be of outstanding universal value to mankind are recognized by the list. A 21-member international committee judges the nominations from all countries against established criteria.

For a natural property to be accepted, it should be, among other things, an outstanding example of the earth's evolutionary history, represent ongoing geological processes, contain "unique, rare or superlative natural phenomena" and be a habitat for rare or endangered species.

For a cultural property to be accepted, it must be a "unique artistic or esthetic achievement," be of influence over a span of time and be "extremely rare or of great antiquity."

Previously, the committee (in 1978 and 1979) accepted nominations from the U.S. of Grand Canyon National Park, Everglades National Park, Independence Hall in Philadelphia, Yellowstone National Park and Mesa Verde National Park. Examples of accepted nominations from other countries include Mont St. Michel and its bay and Chartres Cathedral in France, the old city of Dubrovnik in Yugoslavia, Memphis and its necropolis in Egypt and the Auschwitz concentration camp and Cracow's historic center in Poland.

Solar Guide for Building Codes

In response to requests from state and local code officials seeking assistance from the Department of Energy on how to avoid "a proliferation of different, conflicting code requirements," DOE has published a uniform set of guidelines for adapting building codes to cover solar energy use. The model document, "Recommended Requirements to Code Officials for Solar Heating, Cooling and Hot Water Systems," was prepared by the Council of American Building Officials in compliance with consensus procedures.

In the section of the document on building, there are provisions for such concerns as access to solar energy systems; collectors; structural loads; thermal insulation, and building components functioning as solar energy components, including passive and hybrid systems. Consideration is given to firesafety, roof and wall panels, natural light and ventilation and other topics.

The section on electrical installations covers, among other things, location with respect to adverse environments, grounding and prevention of fire spread. The section on mechanical systems considers such topics as freeze protection, hazardous heat transfer fluids, piping installation and trenching and excavation.

A copy of the document may be obtained without charge from CABO, 2233 Wisconsin Ave. N.W., Suite 560, Washington, D.C. 20007. A self-addressed label should accompany the request.

HUD Names Energy Participants

Seventeen communities, selected from 352 applicants, have been chosen by HUD to participate in an $11 million program to encourage energy conservation activities and the use of alternative energy technologies.

The program, announced last February, called for plans containing one or more of the following provisions: assistance to low- and moderate-income people in energy conservation; encouragement of energy conservation services and supplies,

continued on page 58

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Government *from page 56*
and assistance to small and minority businesses to achieve energy savings.

Among the approved projects is a comprehensive energy strategy for six rural counties in North Dakota, where a variety of projects will be funded, including construction of an alcohol production facility, solar heating systems and windmills. Another project, in Susanville, Calif., will retrofit 126 homes of low- and moderate-income persons with transmission lines to utilize geothermal fluids available from two existing wells for space heating and domestic hot water.

Participants in the program will be required to take part in workshops, conferences and other presentations involving their projects.

News/Competitions

Ideas for Quadraplex Housing Generated as Economy Option

The Boston firm of Vitols Associates is first place winner in a national design competition of ideas (for an actual 10-acre suburban property near Boston) for quadraplexes—residential structures that include four attached dwelling units. The intent of the competition was to promote the quad as an alternative to the single-family detached house that can be built at a lower cost and yet be compatible with the New England environment and life style. In view of rising land, materials and labor costs, with most of the population priced out of the housing market, the competition sponsors wanted to demonstrate that the quad can provide variety, make better use of land and conserve energy resources.

The competition was sponsored by the Greater Boston Real Estate Board in conjunction with the Boston Society of Architects/AIA, the Builders Association of Greater Boston and the Savings Banks Association of Massachusetts. It drew 270 registrations, with 42 entries that complied with competition rules. Criteria for judging the entries were compatibility with the environment, affordability, marketability, innovative design features and energy efficiency. The projected average purchase price of each unit was to be $55,000, excluding land costs but including the costs of site preparation and installation of services.

The first place winner won a cash award of $3,000. Other winners are: Perry, Dean, Stahl & Rogers, Inc., Boston (second place; $1,000); Charnisky Kwan Associates, Watertown, Mass. (third place, $500), and Monacelli Associates, Cambridge, Mass. (first honorable mention; $100).

Members of the jury were John M. Corcoran (chairman); A. Anthony Tappe, FAIA; Anthony L. Galeota Jr. (Builders Association); Vernon W. Parkhurst (Savings Banks Association), and Florence K. Shrier (real estate board).

Prizes Set for Designs of Unbuilt Underground Works

The American Underground-Space Association (AUA) is holding a competition for works in progress in earth sheltered and underground construction. It is primarily for work that has not yet been executed. Submissions may be nearing completion, or may be theoretical or speculative in nature. Professionals in architecture and engineering, and students in these fields, are invited to submit entries in four general categories: single-family residential; multifamily residential; commercial/industrial, transit and mixed use facilities, and research that does not directly result in built construction. The architectural projects may be for new construction, adaptive use or retrofits.

Winning and selected entries will be displayed at AUA's international conference and exhibition on underground/earth sheltered projects and concepts, to be held in Kansas City, Mo., June 8-10. The winning and selected entries will be featured in a book, *Directions in Earth Sheltered and Underground Construction,* but the designs remain the property of competing architects and engineers. Cash prizes ranging from $1,000 to $200 will

continued on page 64

1

Furnishings

As resources for design and objects of design. By Stanley Abercrombie, AIA

A new series of tables made of sandstone—some high, some low, square, rectangular or lozenge-shaped (1)—has been designed by Angelo Mangiarotti. The name of the series is "Incas" and it is produced by Skipper, Milan, Italy. Another Italian design, by Paolo Rizzatto, imported here by ai (Atelier International) as part of its in-stock lighting program, is a lamp (2) available with a clamp base (model A612) or a table base (A613); there are also hanging, wall-mounted and floor models. Also from Skipper of Milan is the "Cassero" wooden bed platform (3) with night table extensions; there is a matching chest of drawers. Among new fabrics by textile designer Maya Romanoff is "Indigo" (4); there are 15 patterns in the collection, in a variety of color combinations. The Series 10 seating system (5) designed by Brian Kane for Metropolitan provides upholstered seating for public areas; the flexible series includes seating modules with or without backs and with or without arms; table units are also available, to be placed wherever needed; frame finishes are polished chrome or any of 18 colors in satin or high gloss. Garry Knox Bennett of Oakland, Calif., designed the cherry "Clock with Four Drawers" (6) shown in the "New Handmade Furniture" show at the American Craft Museum, New York City; it is 51 inches tall.

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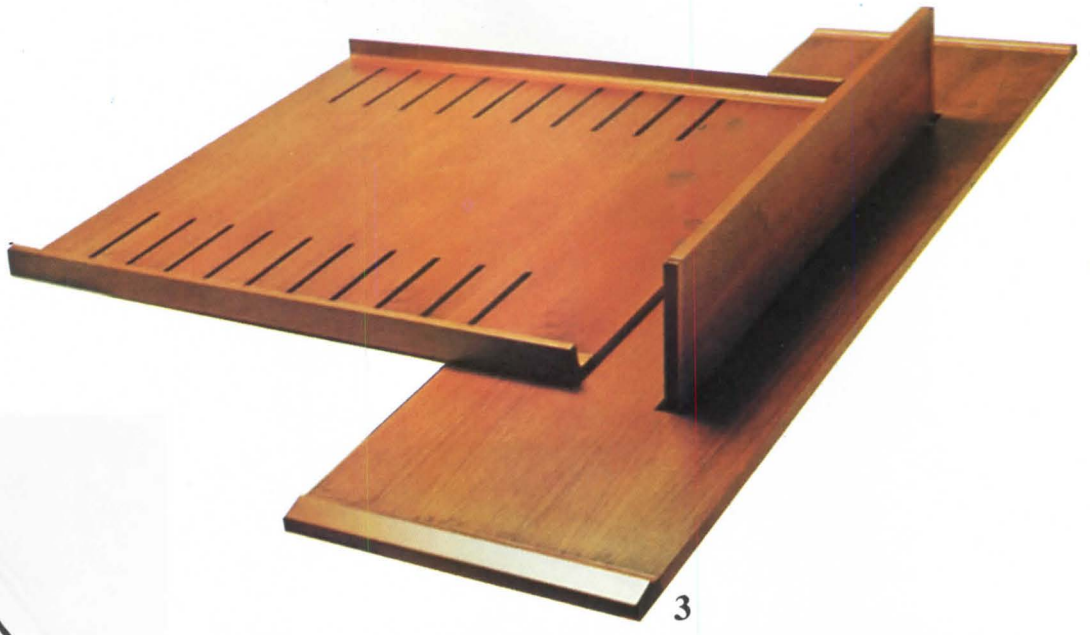

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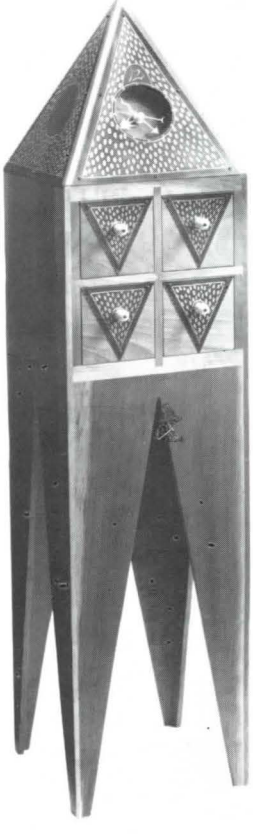

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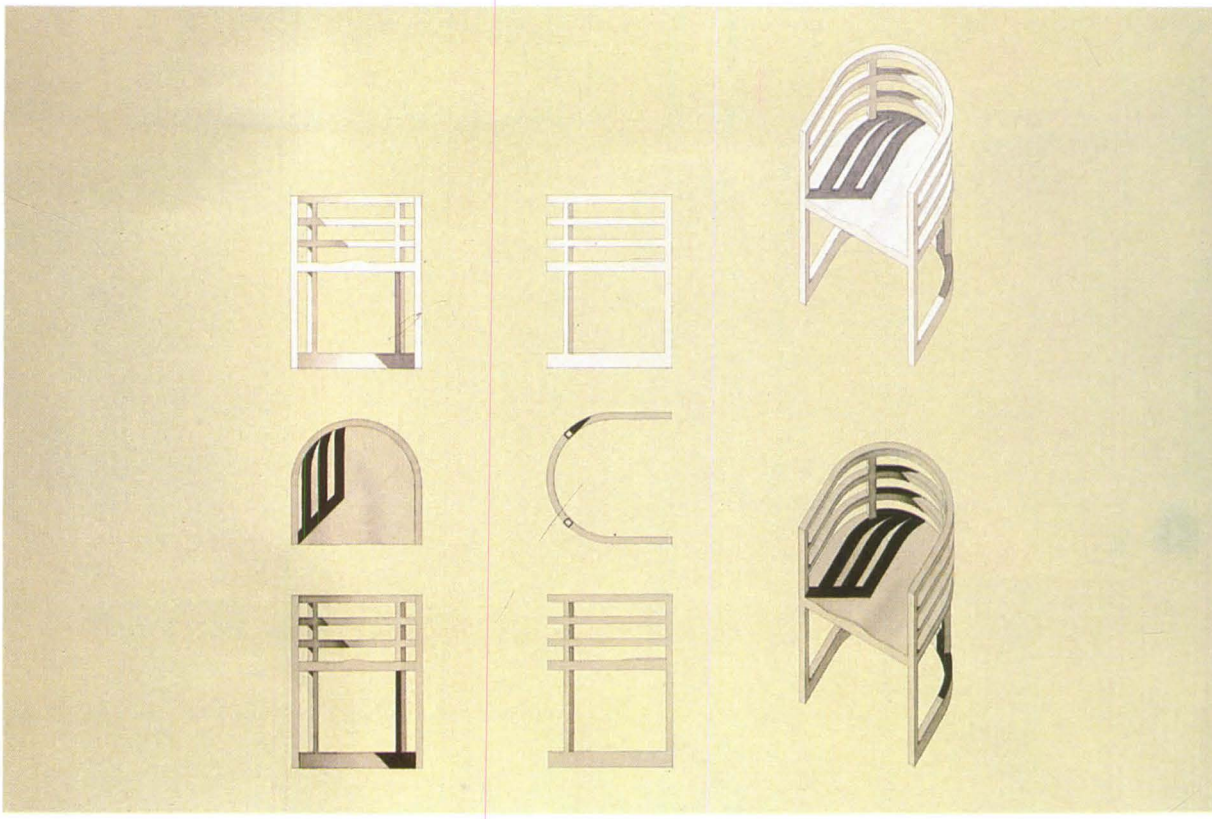
Courtesy, American Craft Council



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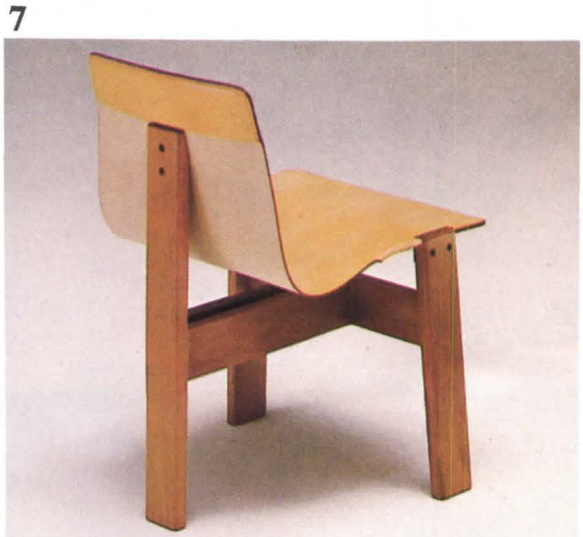
Drawings by Richard Meier, FAIA, (1 and 2) for the furniture of his Aye Simon reading room in Frank Lloyd Wright's Guggenheim Museum are currently being shown at the Max Protetch Gallery, New York City, and replicas of the chairs themselves will soon be marketed by Knoll; the reading room originals were of natural oak; the Knoll versions will be finished in black lacquer. David Flatt's carved chair with a cantilevered seat (3) was shown in "Out of the Woods," an August exhibition at the Milwaukee Art Center, and the birch tables by Lee A. Schuette of Durham, N. H., (4) were seen at the American Craft Museum, New York City. Castelli's "Axis 5000" beam-mounted seating (5), appropriate for institutional installations, has seat and back cushions of flame-retardant high resiliency polyurethane foam, injection molded to a shell of molded hardwood plywood; seats and backs are joined to the oval steel beam by steel straps; armrests and bases are cast aluminum alloy covered with a polyurethane skin; also available are tables of white plastic laminate. The Beylerian Design Group's "Rolling Grid Cubes" (6), topped with glass, are of white epoxy painted steel with black casters. In three heights for three different seating postures, with three legs and also built of a combination of three materials—wood, leather and steel—is the "3 Tre" chair (7) designed by Angelo Mangiarotti for Skipper of Milan; frames are available in two varieties of walnut or in a dull black finish; leather slings are available in four colors; steel braces at the back and sides are covered by the slings they support. □

7



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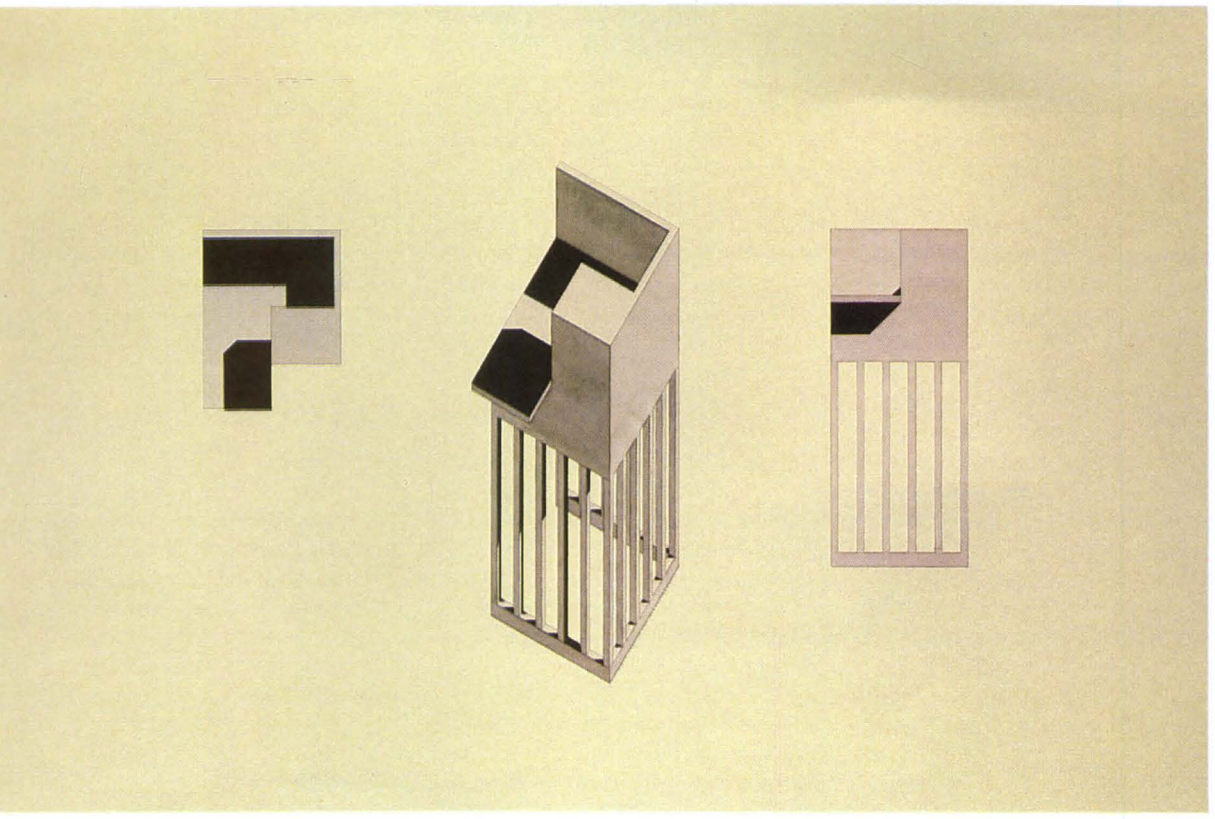

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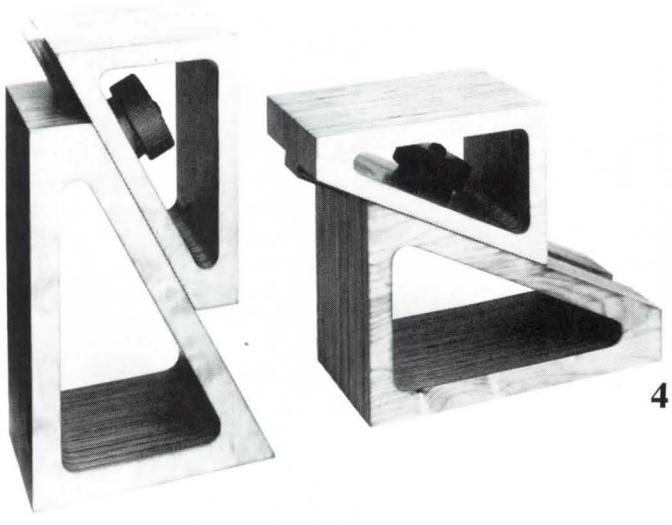

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Courtesy, American Craft Council

5

Competitions *from page 58*
be given in each of the four categories.

Competition consultant is Edward R. Frenette, AIA, of Minneapolis; manager is T. Lance Holthusen, president of TLH Associates, Inc., St. Paul. Entries will be judged by a panel of architects, educators and engineers.

Deadline for submissions is Feb. 15. For information, contact: AUA, TLH Associates, Inc., Suite 900 Minnesota Building, St. Paul, Minn. 55101.

Another Portland Competition Picks Oregon Builder, Designer

Portland, Ore., which recently conducted two architectural design competitions—for Pioneer Square and for a new city/county office building—evidently likes the competition process. Its most recently announced winner is in a competition to develop two downtown city-owned sites on adjoining blocks, the last block and a

half remaining in the South Auditorium urban renewal area. The winner is the development entity Olympia & York Properties, an Oregon corporation to be organized and owned by O & Y Equity Corporation and KOIN-TV, Inc. The principal architect for the development team is Zimmer Gunsul Frasca Partnership, Portland.

The year's extensive selection process involved the submission of proposals in June by 10 nationwide developers. The land was offered for sale by the Portland Development Commission, with the mandate that it could not be resold without written consent until satisfactory completion of construction of improvements.

Seven of the 10 proposals were selected by an advisory committee for final consideration. The committee selected the winning developer through detailed evaluations, including in-depth interview sessions, correspondence and "community input." The committee said the winning proposal met the following criteria: compliance with the development objectives of the sites; economic feasibility; financial responsibility of the developer; proposed sales price of the land, and proposed construction schedule.

The projected development for one block contains KOIN Center, a multiuse building with four levels below grade and 29 levels above grade for KOIN offices and studios, restaurants, shops, a multitheater complex and 10 stories of housing. The half block will be the site of a hotel and housing. A third site on a contiguous block owned by KOIN will have a 15-level atrium office building.

Other developers among the finalists were: Austin Co./Winmar Co., Inc. (Pietro Belluschi, FAIA, architect); Forbes Development Corporation (Fisher Friedman Associates, architect); Hadley Properties Inc. (William D. Podesto & Associates, architect); Heron Development Co. (Bumgardner Partnership, architect); Moran Construction Co. (Naramore Bain Brady & Johanson, architect); Pacific Place Interests (Terry & Egan, architect); David D. Parr (Stanley A. Smith, AIA, architect); M. David Paul & Associates (Landau Partnership, architect), and Rockefeller Center Development Corporation (Skidmore, Owings & Merrill, architect).

Firm Selected to Renovate Florida/AIA Headquarters

The winner of a competition sponsored by the Florida Association of Architects/AIA to renovate its headquarters is Harper & Buzinec of Coral Gables. The firm was selected from among 24 entries. The 1890 building, which stands across the street from the state capitol in Tallahassee, will be renovated at a cost of $300,000.

A $3,000 cash award went to the winner. Second place and $1,500 went to Catalyst, Inc., Orlando; third place and $1,000 to Barrett, Daffin & Carlan, Inc., Tallahassee, and fourth place and $500 to Lemuel Ramos & Associates, Inc., Miami.

The jury for the competition was S. Scott Ferebee Jr., FAIA; George M. Notter, FAIA, Boston, and Archibald C. Rogers, FAIA, Baltimore. Professional adviser was Mark T. Jaroszewicz, FAIA, dean of the college of architecture, University of Florida.

Florida A&M Project Given To Jacksonville Designer

Clements/Rumpel/Associates, Jacksonville, Fla., has won a national competition for the design and design delivery of the school of architecture building at Florida A & M University. Rowe Holmes Associates, Tampa, Fla., placed second and James Associates, Indianapolis, placed third.

The competition called for a 65,000-square-foot building, to cost a maximum of $4.5 million and to be completed by July 15, 1982. According to Forrest Wilson, AIA, professional adviser to the competition, "The jurors had to decide not only on the quality of the design and design delivery concept proposed but on the ability of the architect to adapt his or her design to the program as he or she becomes more aware of its demands through familiarity with the client, the site and other requirements impossible to include in a competition program."

The Clements/Rumpel design is a building that incorporates passive energy concepts with other program requirements to create "a sense of place" (see photo below).

Sections of the building are separated by a series of south-facing thermosyphon walls. The walls are connected to form a

continued on page 66

The American Institute of Architects introduces an Unusual Addition to Its Line of Practice Aids—

Preventive Medicine for Headaches

The traumatic headaches owners get from uninsured adversity can be *very* contagious. The architect of a project struck by uninsured fire, or casualty, or unbonded contractor default may suffer embarrassment, economic loss, and countless hours spent in the notably unpleasant task of sorting out the mess.

Having recognized that sufficient construction bonding and insurance are in your own best interest as well as your client's, however, you still have a major problem. Insurance and bonding is a complicated business, full of technical concepts and esoteric terminology. What aid can an architect possibly give to an owner struggling through the informational maze of bonds and insurance?

AIA Has the Help You Need. The definitive Second Edition of *Construction Bonds and Insurance Guide*, by Bernard B. Rothschild, FAIA, explains all the who's, what's, when's, where's and why's of construction-related bonds and insurance, as required by AIA Document A201, General Conditions of the Contract for Construction. It provides *invaluable* guidance to—and mutual understanding of respective responsibilities among—owners, insurance advisors, and architects.

The *Guide won't* make you an insurance expert. Indeed, it stresses the importance of an owner's seeking the counsel of a qualified insurance professional. What it *will* do is define your proper role, as an architect, in relation to construction bonds and insurance, and give you a solid working knowledge of protective requirements and options.

Its handy looseleaf format allows you to augment the descriptive information provided with additional notes and documents from your own practice.

A Revolutionary Combination of Proven Ingredients. For the first time anywhere, the *Guide* brings together:

- *Explanations* of how construction bonds and insurance requirements are met, with special reference to widely used AIA Documents.
- A comprehensive *glossary* providing clear and concise definitions of relevant insurance industry terms.
- *Samples* of the many forms actually used by companies insuring construction projects.

The *Guide* explains how to start a project off on the right track by initiating the Owner's Instructions for Bonds and Insurance (AIA Document G610), and how these matters are dealt with in the General Conditions of the Contract for Construction (A201) and other AIA Documents.

The discussion of construction bonds covers bid or proposal bonds, performance bonds, labor and material payment bonds, completion bonds, and maintenance bonds.

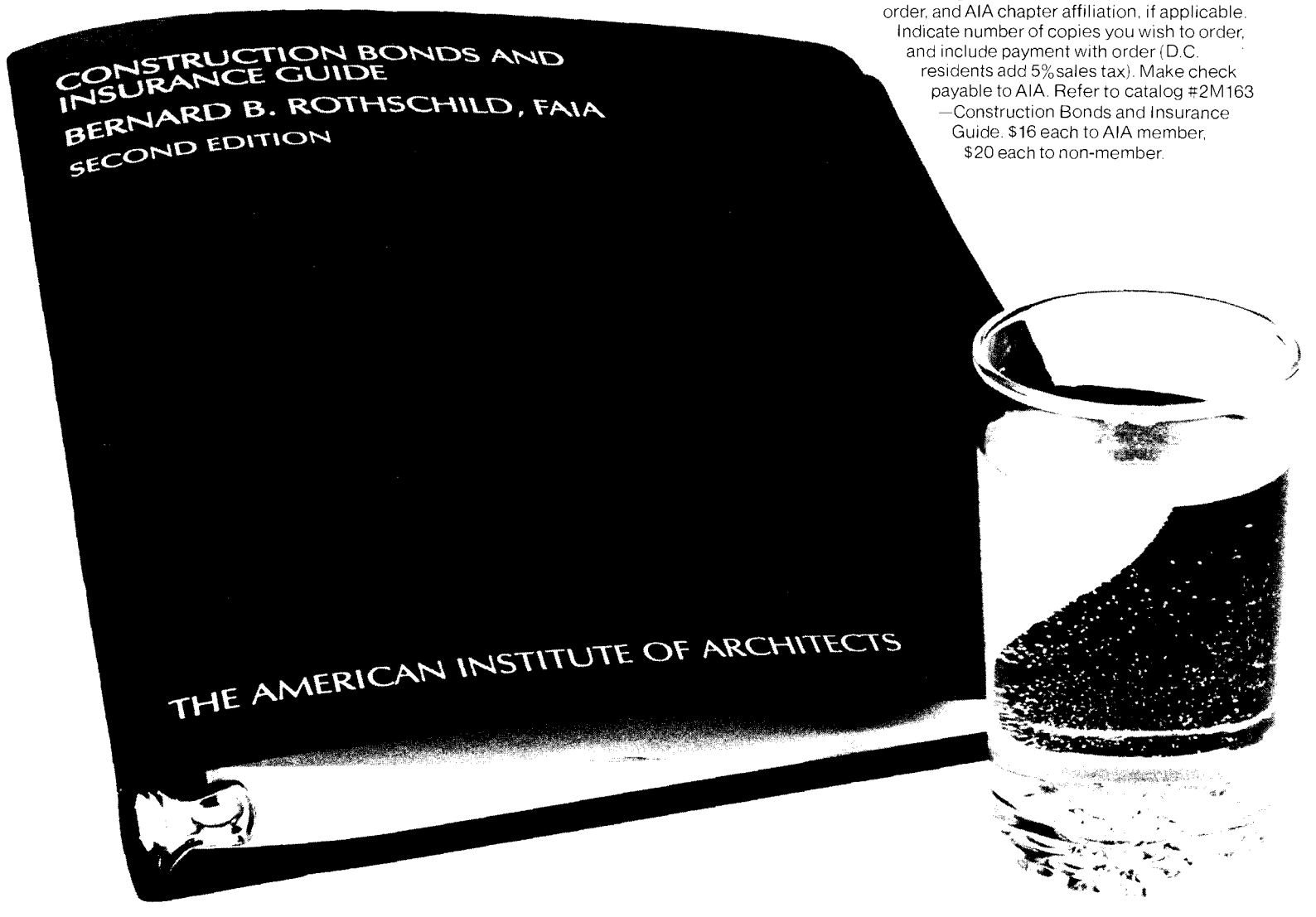
The *Guide's* treatment of insurance details workers' compensation insurance, employer's liability insurance, the numerous specific elements of general liability insurance, and various endorsements to property insurance.

Included throughout these discussions are explanations of how levels of coverage are determined and paperwork is performed, hints about special areas of vulnerability the architect should be aware of, and notes about the considerations that apply to the architect involved in "design-build" project delivery of construction management.

In short, timely consultation of *Construction Bonds and Insurance Guide* will save everyone involved in a project from a whole range of paralyzing headaches.

Recommended Dosage: At Least One Copy Per Office. Having made the *Guide* available to your clients and their insurance advisors, you may find that the volume is constantly "on loan." Why not buy an extra copy for office use only?

Order your copies now from Publication Sales, The American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006, supplying the following information: firm name, correct mailing address, name of person to receive order, and AIA chapter affiliation, if applicable. Indicate number of copies you wish to order, and include payment with order (D.C. residents add 5% sales tax). Make check payable to AIA. Refer to catalog #2M163 —Construction Bonds and Insurance Guide. $16 each to AIA member, $20 each to non-member.



Competitions *from page 64*
garden and circulation system that extends the entire length of the building. Heat captured in the thermal chimney during the winter months will be stored in the building's mass. During the summer, the structure will be partially cooled by night radiation introduced into the building through the thermosyphon walls. Daylighting enters the studios and other spaces by north light roof monitors and by continuous south-facing light shelves. The scale and materials of the building are influenced by those of the neighborhood and adjacent campus.

Jury members included John Harkness, FAIA, chairman; Lawrence B. Anderson, FAIA; Porter Driscoll, AIA; Laurin Askew, AIA; Richard Chalmers, AIA, and David Ross Epperson and James Galbraith, both architects employed by the State of Florida, department of education.

Women's Design Awards

Women in Design International, founded at the 1977 Aspen design conference, has announced its first international design awards program "to recognize the work and achievement of outstanding women in all fields of design." The program, endorsed by the National Endowment for the Arts, is open to professional and student women in such categories as environmental design (architecture, planning, landscape architecture and interior design), photography, graphic design and sculpture and painting.

Entries are to be submitted on 35mm slides, with a limit of 12 slides per category. The entries will be judged by an international panel of designers, educators and editors. Deadline for entries is Mar. 31, 1981. For entry forms, write: Call for Entries, WID International, 530 Howard St., Second Floor, San Francisco, Calif. 94105.

DEATHS

Richard E. Baringer, FAIA, St. Croix, Virgin Islands
Herbert Burnham, Yucca Valley, Calif.
David A. Johnson, Laguna Niguel, Calif.
Simon B. Zelnick, FAIA, New York City

BRIEFS

The National Roofing Contractors Association will send a list of books and materials on roofing design and technology to those who request it. Contact: NRCA, 1515 N. Harlem Ave., Oak Park, Ill. 60302, (312) 383-9513.

"Passive Solar Design Awards Catalog" features 17 award-winning entries in a statewide passive solar design competition sponsored by the New York Energy Research and Development Authority. It is available for $7 from: Technology Transfer, NYSERDA, Rockefeller Plaza, Albany, N.Y. 12223.

The first holder of the Nathaniel and Margaret Owings distinguished alumni memorial professorship in architecture at Cornell University is Jerry A. Wells, who joined the faculty in 1965. The chair was established last year with a gift from Nathaniel Owings, FAIA, and his wife, and is further endowed with commitments by alumni.

Baltimore's Charles Center has been selected as the recipient of the Urban Land Institute's 1980 "award for excellence." The 33-acre multiuse project was one of the first urban redevelopment projects in the U.S. to be located in the heart of the central business district. The ULI award is given annually to a development project "that embodies elements of quality and innovation that provides a prototype for future development."

The Census of Stained Glass Windows in America, 1840-1940, founded in 1979 to

"preserve a published record of this endangered portion of our national art," is seeking information regarding the location of stained glass windows, particularly those that are endangered or are in obscure places. CSGW wants reports on damage to windows, or demolition of buildings involving removal of stained glass. Contact: Willene B. Clark, Department of Art History, Marlboro College, Marlboro, Vt. 05344, (802) 257-7433.

"Preservation and Energy Conservation," a slide/sound program produced by the Advisory Council on Historic Preservation, is available for loan ($8 for postage and handling) and sale ($90) from the Conservation Information Program, Office of Museum Programs, Smithsonian Institution, 2235 Arts & Industries Building, Washington, D.C. 20560. The package contains a carousel of 73 slides, an audio cassette, a script and instructions for use.

The City of Seattle is searching for a director of the department of community development. The director is responsible for economic development, environmental management, housing development, neighborhood planning and downtown projects and administers Seattle's $17 million block grant program. For information, contact: Ellin K. Spenser, Personnel Department, 710 Second Ave., Seattle, Wash. 98104.

General John Morris, chief of engineers, Army Corps of Engineers, has been selected to receive the 1980 award of merit from the American Consulting Engineers Council's committee of fellows. The award is made "in recognition of contributions to engineering and the public."

The American Consulting Engineers Council has announced its 1980/81 scholarship program for students attending a university approved by the Accreditation Board for Engineering and Technology. Applications must be forwarded before March 1981. Contact: ACEC, 1015 15th St. N.W., Washington, D.C. 20005, (202) 347-7474.

James Richard McGranahan, FAIA, of Tacoma, Wash., has been named the 1980 "honored alumnus" of the school of architecture and environmental design, California Polytechnic State University.

"Understanding Professional Liability Insurance" is the title of a recent publication of the American Consulting Engineers Council. Written by Atlanta attorney Larry McReynolds, the 31-page document discusses special coverage problems, reviews exclusionary clauses and alternative types of insurance and gives suggestions on proper coverage. It is available for $5 prepaid from ACEC, 1015 15th St. N.W., Washington, D.C. 20005.

Irvan F. Mendenhall, chairman of the board of Daniel, Mann, Johnson & Mendenhall in Los Angeles, has been inaugurated as president of the American Society of Civil Engineers.

Women perform as well as men in 14 areas of endeavor, according to the results of eight years of aptitude tests conducted by the Johnson O'Connor Research Foundation. One of the areas is "memory for design: how well subject remembers drawings; useful in careers such as drafting, illustrating, architectural rendering." But men excel women in "structural visualization: important in engineering, architecture, surgery, mechanics and building" and in "grip: measure of pure and simple muscular strength."

The National Sculpture Society is seeking nominations for its Henry Hering medal given for "outstanding collaboration" among architect, owner and sculptor in the "distinguished use of sculpture in an

continued on page 69

Retreat *from page 49*

While he is experiencing these more personal defeats, now that he is out in the working world, he observes that the profession as a whole is not much appreciated by the public at large. He sees zoning boards, review boards and lawyers, not to mention citizen groups, making pivotal decisions on projects, as well as clients who sacrifice architectural opportunities for money (a notion of personal and real estate economics he cannot even understand).

Nevertheless, still inspired by the vision of "designing," he decides to open his own office, again opening his arms to the world. The world—this time quite directly—rejects him, and the practice is not successful. Unwilling to publicly announce rejection/failure by going back to work for another firm, he may align himself on some basis with a governmental agency, an institution or a university, still keeping the image of a practice.

His world of concerns (which he has convinced himself out of lowered self-esteem are the *real* concerns, the important ones) becomes smaller until, perhaps, eventually they come down to the interior design of a room. He rejects the world that rejected him, and its problems of energy conservation, economics, banal architecture, urban non-design, downtowns, commerce and his training to explain and lead the public in esthetic issues. Indeed, he rejects the public, his focus now being the intellectual and esthetic integrity of controllable individual spaces and issues. He also rejects his fellow architects, particularly those with successful practices. Being intelligent and articulate, he may try to use the media to put forth the deliberately unrealizable ideas which, due to his small practice, he has had ample time to develop.

The result of the gap between architecture and society inspired by this narcissistic sense of rejection is the creation of architectural ghosts, those major architectural and urban design issues that appear to be largely invisible to the architectural community. Perhaps fear and loathing of the marketplace and ignorance of the causality of these issues make them occult, otherworldly and invisible. These ghosts haunt a profession which once grandly defined architecture as "man in possession of his earth."

Everyone may have his own list of architectural ghosts, of great neglected design issues deliberately avoided. Heading my list would be the commercial strip. Robert Venturi identified the issue more than 10 years ago, but besides observations on the impact of speed on scale and signs, and the supremacy of these over buildings, architects have provided little in the way of design models to deal with one of our most prevalent design challenges.

Literature on the strip in subsequent years has been historicist (tracing the evolution of style changes in roadside offerings, MacDonald's, Jack-in-the-Box, etc.) or nostalgic (White Tower restaurants, the diner, the gas station, etc.), but no one has offered any design solutions for the overall strip. We know what a good street is, and have lots of models, but we do not know what a good strip is. We have no design model. Some other ghosts are theme architecture, scenographic design, the subdivision, sex and sensuality in architecture, idiosyncratic design, the politicization of architecture and practically all commercial architecture.

The explorations and gropings discussed earlier may yet yield some results, but what is needed are counterbalancing examples of how sensitive design can respond to the real interests of society's emotional, economic and political well-being. The relative importance of architects is, as we all know, declining with severe consequences for ourselves and our world. A proper balance and an equally liberating force for design might be involvement with the tougher points of architecture's relationship with society in general. □

Briefs *from page 67*
architectural project." Deadline for entries is Mar. 2. Contact: NSS, 15 E. 26th St., New York, N.Y. 10010, (212) 889-6960.

"Design + Energy 1981" is the second in a continuing series of student design competitions conducted by the Association of Collegiate Schools of Architecture to promote the integration of design and energy concerns. The second competition focuses on the use of daylighting as a major design determinant. The competition is open to upper level students in U.S. and Canadian schools of architecture. Deadline for entries is Jan. 30. For information, contact: Ellen Palmer, Design + Energy, ACSA, 1735 New York Ave. N.W., Washington, D.C. 20006. □

Letters from page 4
More on the Lever House: The origin of the Lever House project seems to differ, depending on who tells the story. (See Mar., p. 78; Aug., p. 8.) Now I would like to tell mine.

It was a beautiful day in Chicago in late spring 1949 when Nat Owings called me into his office and asked that Bill Hartmann and I accompany him on the Outer Drive as he drove up to Lake Forest. Nat drove, Bill sat in the front seat and I in the rear of Al Shaw's borrowed convertible. Nat explained that a man representing a large company in the U.S. was investigating sites for its headquarters. They were considering Los Angeles, Chicago and New York City.

Los Angeles had already been eliminated, so it was now Chicago or New York. Nat asked that we select the best possible sites in Chicago, evaluate them and produce sketches to show their potential. A model was to be part of the package, and the representative would eventually take the material out of the country where the decision was to be made. Nat would not be back in the office for a while, so I was to fly to Santa Fe and discuss our progress at his ranch. (He gave the date, but all I remember is that it was a very short time.) As we came off the Outer Drive, with a flat tire, he handed Bill a piece of paper that was the program of space requirements. Our investigation of sites was to be kept secret, and we would not be told who the client was. Nat pulled into a service station to get the tire changed, and Bill and I took a cab back to the Loop.

On the way back, we read over the list of requirements, and one was a Spry kitchen. Because Bill had gone to the Massachusetts Institute of Technology, he immediately identified Lever Brothers as the secret client. For our office records, we called the project "Madame X."

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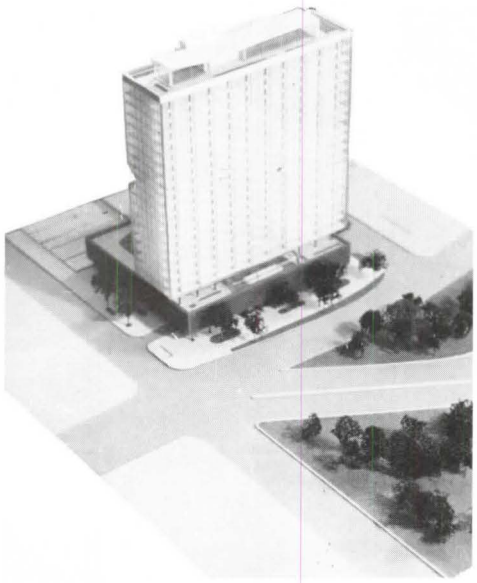
Letters *from page 69*

After investigating possible locations along upper Michigan Avenue, we found two sites that showed real promise; one, I believe, was a portion of the block just north of the water tower park on the west side of Michigan Avenue; the other was diagonally across from the Drake Hotel on Michigan Avenue, using the whole frontage from Oak to Cedar Street.

On the scheduled day, I flew to Santa Fe where Nat met me, and we drove to his ranch. I reviewed the sketches and site possibilities with him, and he decided we should present the Oak Street site and develop the scheme for it, as it was directly across from the Oak Street beach and Lake Michigan. The end of the park was guaranteed open space, and the Drake Hotel would be a good neighbor. I had concentrated on the other site because I felt the zoning for the Oak-Cedar site might have been a problem. Nat was convinced that since the Oak Street half of Michigan Avenue frontage was zoned commercial, there would be no problem in getting the rest of the site rezoned. Soon, dinner guests arrived, and we had one of Nat's steak barbecues.

The next morning, I found a drafting table already set up in the living room, so, while everyone else went riding, I worked



on sketches for the Oak Street site. I don't remember the names of everyone who worked with me on the project, but I recall a few. The in-house SOM model-maker was on vacation, so Frank Stengel (deceased) made the model. Others I remember who helped were Arthur Myhrum (deceased) and Gyo Obata.

Because of the high water table, it was felt that parking should be above ground, so two levels were provided in a solid block covering most of the site. A visitor and taxi drive connecting Oak and Cedar Streets had a drop-off at a small glazed lobby where the elevators and escalators were. Behind the lobby and driveway was covered visitor parking. The reception area was a glazed recessed fourth floor, arrived at by escalator from the first floor entrance. This elevated space would have a commanding view of the beach and Lake Michigan. Above this was a 20-story office tower, with continuous glass and opaque spandrels, its long side facing east and west.

On the appointed date, the man who was flying out of the country arrived from his office in the Field Building to pick up his parcels. Just before the model was placed in its box, I snapped three pictures (see left). I heard later that the design was liked, but the decision was made to locate in New York City. Nat Owings from time to time would tell me about the project as it was being developed in Manhattan. I think I was told that the model ended up in Louis Skidmore's office.

Over 30 years have passed, and one's memory can be hazy without records to consult. My only records are the three snapshots, but they clearly show a building very similar to Lever House in its basic concept.

Charles D. Wiley
San Francisco

PRODUCTS

Paneling.
Clear grained wood paneling has a European clip system of application that eliminates the need for nails through the wood. The paneling can be used in high moisture areas such as swimming pools, kitchens and baths as the clip system allows expansion and contraction. (Ostermann & Scheiwe U.S.A., Inc., Spanaway, Wash. Circle 176 on information card.)

Woven Metallic Laminates.
Aluminum woven cane decorative laminate is designed for applications on vertical and light duty horizontal surfaces. The laminates are said to resist a number of commonly used organic solvents and household materials. (Ralph Wilson Plastics Co., Temple, Tex. Circle 192 on information card.)

Partition Systems.
Movable office partitions in three designs —floor-to-ceiling, partial height and open base—feature fewer components than comparable systems, fine line joints and nonprogressive panels. (Modernfold, Inc., New Castle, Ind. Circle 186 on information card.)

Portable Drafting System.
A portable drafting system, which fits into an attache case, is designed for on-site use by architects and engineers. The model 300 combines the functions of a T-square, triangle, ruler and protractor in one tool. The unit is available with interchangeable scales, standard and metric. (Draftette Corporation, Solana Beach, Calif. Circle 185 on information card.)

Window Blinds.
Heartwood basswood window blinds are a cross between wooden shutters and venetian blinds. They provide natural insulation and come in 27 colors. (Americana Naturals, Inc., Huntington Beach, Calif. Circle 191 on information card.)

Lighting.
H.I.D. compact task lighting units give correct light dispersal when mounted on 65-inch-high wall panels. An optional model projects light from both top and bottom. Ballasts accept metal halide or mercury vapor lamps. (Steelcase, Grand Rapids, Mich. Circle 184 on information card.)

Solar Glazing Film.
Transparent polyester film for Trombe walls, skylights and greenhouses is offered in 4x50- and 4x300-foot rolls. 3M calculates that energy gains of 15 to 25 percent are possible when the film is used in place of glass in south-facing solar devices. Used between two panes of glass, it is said to insulate like a triple pane window and transmit light like a double pane window. (3M, St. Paul. Circle 188 on information card.)

Fluorescent Troffers.
Concealed "T" ceiling troffer permits relamping without damaging adjacent ceiling tile. Heavy duty torsion springs hold the trim against ceiling tile. (Keene Corporation, Union, N.J. Circle 172 on information card.)

Fluorescent Lighting.
Forty-six fixtures for residential use are designed to consume less energy than incandescent lights. (Troy Lighting, Inc., City of Industry, Calif. Circle 170 on information card.)

Estimator.
Pocket-sized estimating instrument works on geometric principles to give estimates of distance and height across inaccessible terrain or private property. (Telefix Division of Nautigon Marine, New York City. Circle 169 on information card.)

Hot Tubs.
Redwood and mahogany hot tubs are equipped with Jacuzzi whirlpool baths. (Almost Heaven Hot Tubs Ltd., Renick, W.Va. Circle 181 on information card.)

THE PRITZKER ARCHITECTURE PRIZE

The Pritzker Architecture Prize is given annually for significant contributions to the built environment through the art of architecture.

Established in 1979 by the Hyatt Foundation, the prize is $100,000. It was awarded to Philip Johnson of the United States in 1979, the 1980 prize was given to Luis Barragan of Mexico.

The members of the international jury are:
Mr. J. Carter Brown
Lord Clark of Saltwood
Mr. Arata Isozaki
Mr. Philip Johnson
Mr. J. Irwin Miller
Mr. Cesar Pelli

The jury welcomes nominations from all countries. Nominations for 1981 should be sent before January 31, 1981 to:
Mr. Carleton Smith, Secretary of the Jury
The Pritzker Architecture Prize
Box 5757
Chicago, Illinois 60680, U.S.A.

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A beautiful home for a cosmetics company.

ELEVATORS BY DOVER

The new international headquarters building for Mary Kay Cosmetics, Inc. in Dallas presents an elegantly curved, gold-windowed face to its neighbors. All administrative and accounting activities of the company are housed in the 115,000-sq.-ft. facility. The eight-floor building is served by three Dover Traction Elevators, housed in an interior core. For more information on Dover Elevators, write Dover Corporation, Elevator Division, Dept. G P.O. Box 2177, Memphis, Tennessee 38101.

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