AIA JOURNAL

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Insulating glass is a good idea.

Insulating glass with Kawneer's Insulcast 450 is a great idea.

Insulating glass can be a wise investment since it pays off in terms of heat savings, fuel savings and comfort. Now, carry your good idea a little further and consider the framing system.

Kawneer's new Insulcast 450® Thermal Framing can make a big difference.

By adding Kawneer's new Insulcast 450 Thermal Framing your total investment in the combined system will pay back even quicker. In fact, when compared to a non-thermally broken system with insulating glass, Insulcast 450 can reduce the payback period by as much as 15%.

The faster payback is made possible since the small additional investment in Insulcast 450 can provide an additional 20% reduction in total heat loss.

Not all thermal framing systems are alike.

Kawneer's Insulcast 450 features the exclusive Isolock® thermal barrier. Isolock positively interlocks the interior and exterior metal removing the potential danger of framing failure and glass breakage. It also reduces condensation and its damage since heat conduction is minimized to the point where the framing system stays warmer than the glass.

Insulcast 450. The designer's element.

The clean, slim framing members of Insulcast 450 present a flush grid appearance which enhances reflective and tinted glass. Combined with seamless face members it's the perfect solution for designs that require the practicality of insulating glass and esthetics to satisfy the designer's eye.

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KAWNEER
The designer's element

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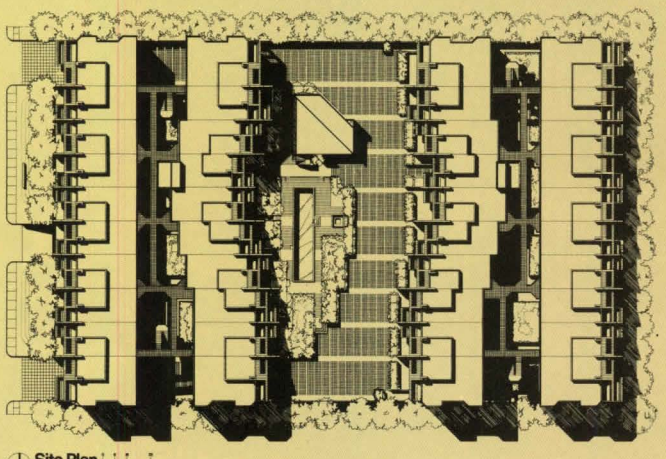

1 Site Plan

40 more units with Inryco™ steel framing

Soaring land prices are forcing architects and developers to seek creative solutions to hold down project costs. Sandy/Babcock & Associates, architects for Augusta Court Condominiums, chose a unique midrise concept instead of conventional 2 and 3 story wood frame construction. Local building codes restrict conventional wood frame construction to 3 stories. Inryco's steel stud and joist framing system was selected as an economical alternative in achieving the desired density of 65 units per acre.

Augusta Court consists of 152 units in four 4 story buildings over a subterranean parking garage. Each building pair is connected by an open steel bridge, providing access to units through open courts. This creative solution provides security, openness and 40 additional units.

We're proud of the way our Inryco steel framing system met the challenges of this innovative project. If you have a design of similar complexity, these versatile steel components offer the means to build it – soundly, attractively and within the budget.

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Inryco offers unmatched counsel and design assistance on steel frame construction. See our data in Sweet's General Building or Light Construction Files – or write for catalogs 37-1 and 37-2. Then contact us for an appraisal of its suitability for your projects: Milcor Division; INRYCO, Inc.; Dept. E-4127; P.O. Box 393; Milwaukee, WI 53201. (TLX 26683 INRYCO A WMIL)

Project:
Augusta Court Condominiums, Houston, Texas
Owner:
A joint venture of David Mitchell Companies and Mac-Carey Properties, Inc., Houston
Developer:
David Mitchell Companies, Houston
Architects:
Sandy/Babcock & Associates, San Francisco; project architect, Steven House AIA
Structural Engineer:
M. Hourani & Associates, Houston
General Contractor:
Urban Construction Company, Houston
Framing Contractor:
Marek Brothers Company, Houston

Inryco
an Inland Steel company

A1-37-1

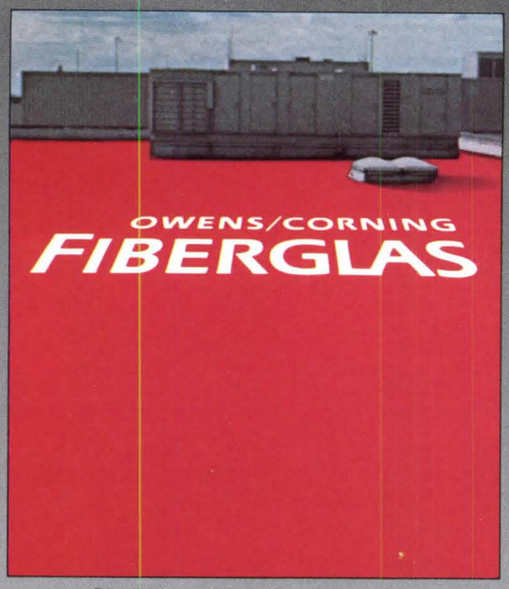
Circle 2 on information card

CONTENTS

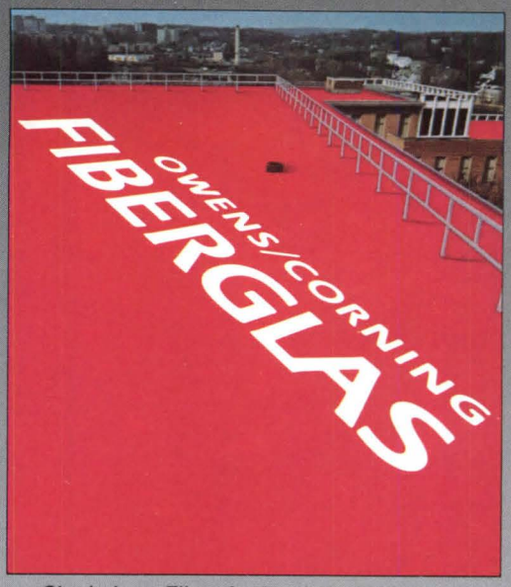
Cover: Photograph by Norman F. Carver Jr., AIA, of the Iberian town of Segovia with its great cathedral and the Alcazar, as seen from across the plains (see page 40).

The AIA JOURNAL, publication number: ISSN0001-1479, official magazine of The American Institute of Architects, is published 14 times yearly at 1735 New York Ave. N.W., Washington, D.C. 20006. **Subscriptions:** for architects; students and faculty of architecture schools; libraries; building construction trade associations and building products manufacturers, in the U.S. $24 and in Canada $32. For all others, in the U.S. $30 and in Canada and other foreign nations $40 a year. Single copies, $3 each. Publisher reserves the right to refuse unqualified subscriptions. For subscriptions: write Circulation Department; for change of address: send Circulation Department both old and new addresses; allow eight weeks. Quotations on reprints of articles available. Microfilm copies available from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Referenced in *The Architectural Index, Architectural Periodicals Index, Art Index, Avery Index to Architectural Periodicals*. Second class postage paid at Washington, D.C., and additional mailing offices. VOL. 71, NO. 5.

Double-layer Fiberglas insulation over FURI.
3 plies Perma Ply-R. Gravel surface.

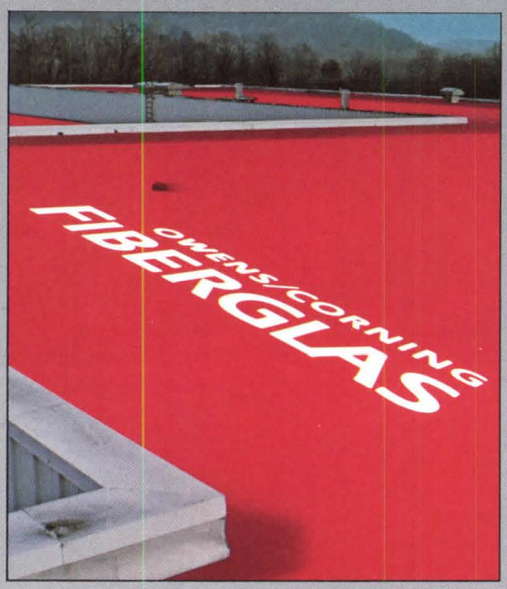


Single-layer Fiberglas insulation.
3 plies Perma Ply-R. Perma Cap® surface.

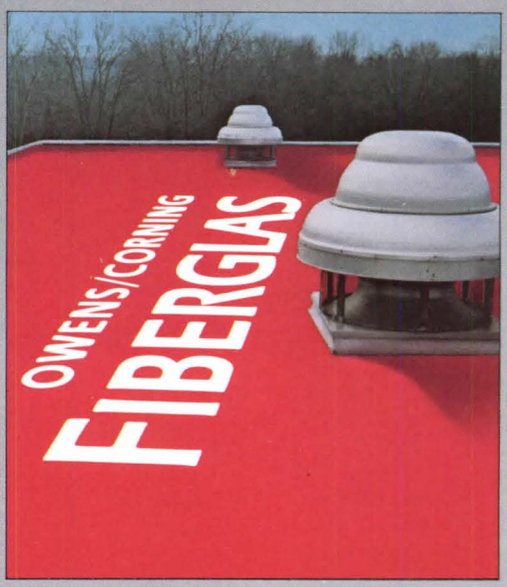


Single-layer Fiberglas insulation with taped joints. 2 plies Perma Ply-R. Gravel surface.

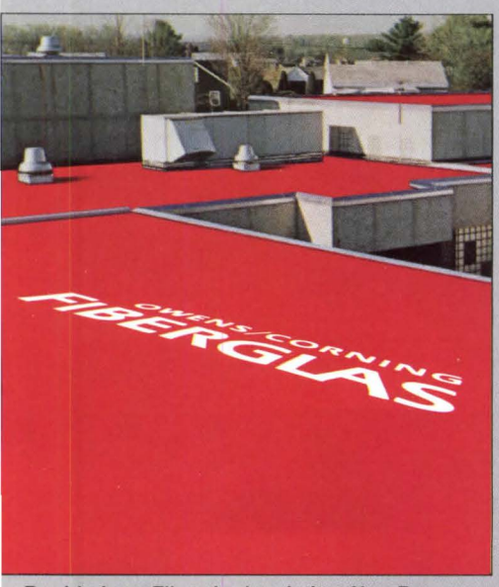
Double-layer Fiberglas insulation.
4 plies Perma Ply-R. Smooth surface.*



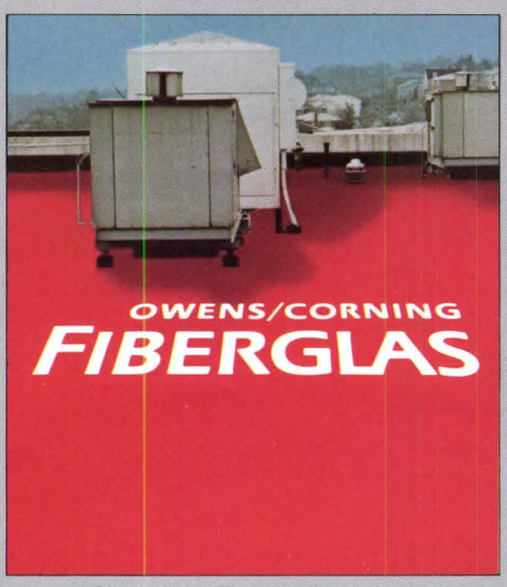
Single-layer FURI. Perma Ply No. 28 perf. base sheet. 2 plies Perma Ply-R. Gravel surface.



Single-layer Fiberglas insulation. New Perma Plus-2® system.† Smooth surface.



Double-layer Fiberglas insulation. New Perma Plus-2 system.† Gravel surface.



Single-layer Fiberglas insulation.
3 plies Perma Ply-R. Unsurfaced.

Perma Ply No. 28 base sheet. 2 plies Perma Ply No. 11. Perma Cap surface over wooden deck.

*Double Eagle® Roof †1 layer IPS, 1 layer SPS

THE TOP ROOF FOR ANY BOTTOM LINE.

No two roofs are the same. No two applications will be either. At Owens-Corning, we offer a full range of specifications to fit virtually every roofing need. So we can put the best roof over your head at a cost that won't go over your budget.

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Owens-Corning Fiberglas Roof Insulation	●	●	●	●	●	●	●	●	●
Owens-Corning Fiberglas FURI®	●	●	●		●	●			●
Perlite								●	
Urethane				●	●	●			
Composites									
Wood Fiber								●	

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We've built our roofing reputation on the most durable roofing felt ever. Perma Ply-R®

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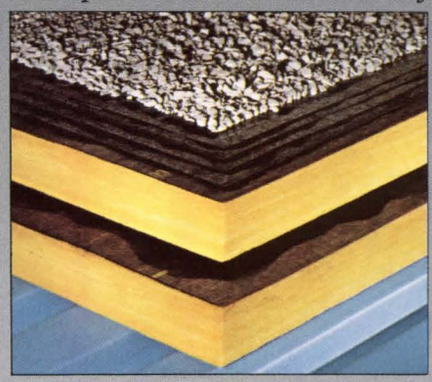

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And when a Certified Contractor installs our double-layer insulation, 4-ply Perma Ply-R roof, you can get the industry's best guaranty. 20 years.

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EVENTS

May 28-30: Center for Palladian Studies second annual conference, Richmond. Contact: Center for Palladian Studies in America, P.O. Box 5643, Charlottesville, Va. 22905.

June 1-5: Solar Technologies Conference and International Exposition, Houston. Contact: American Section of the International Energy Society, U.S. Highway 190 West, Killeen, Tex. 76541.

June 3-6: National Association for Olmsted Parks third annual conference, Chicago. Contact: Sandra L. Higgins, Friends of the Parks, 53 W. Jackson Boulevard, Suite 848, Chicago, Ill. 60604.

June 6-9: AIA National Convention, Honolulu, Hawaii.

June 7-11: Course on Fundamentals of Active and Passive Solar Energy Systems, Hartford, Conn. Contact: The Hartford Graduate Center, 275 Windsor St., Hartford, Conn. 06120.

June 7-11: Course on Lighting Fundamentals for Interior Designers and Architects, University of Kansas, Division of Continuing Education.

June 10-11: Systems '82 show, Chicago. Contact Carol Gosselin, Systems '82, P.O. 11318, Newington, Conn. 06111.

June 11: Seminar on Application of Groundwater Source Heat Pumps for Commercial and Industrial Heating and Cooling, New York City. Contact: Richard M. Miller, American Ecology Services, Inc., 127 E. 59th St., New York, N.Y. 10022.

June 11: Seminar on California's New Residential Energy Standards, San Diego. (Repeat seminars June 18, Anaheim and Eureka, Calif.) Contact: California Council/AIA Energy Seminars, Charles Eley Associates, 519 Mission St., San Francisco, Calif. 94105.

June 13-18: International Design Conference in Aspen, "The Prepared Professional," Aspen, Colo. Contact: Pam Arnold, IDCA Office, P.O. Box 664, Aspen, Colo. 81612.

June 14-16: Marketing Programs That Sell, Effective Government Marketing and Improved Techniques in Contract Writing seminars. Atlanta. (Repeat seminars, June 16-18, Houston). Contact: Don Thompson Associates, 3247 Embry Hills Drive, Atlanta, Ga. 30341.

June 15-18: NEOCON, Chicago. Contact: Office of Communications, 830 Merchandise Mart, Chicago, Ill. 60654.

June 17-18: Course on Wind Effects on Buildings and Structures, University of Missouri-Columbia, Kansas City, Kan.

June 18-20: Construction Specifications Institute annual convention and exhibition, Atlanta. Contact: CSI, 1150 17th St. N.W., Washington, D.C. 20036.

June 20-22: Workshop on Beyond the Suburbs: Planning and Development in Small Cities, Towns and Rural Counties, Baltimore. Contact: American Planning Association, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036.

June 21: Seminar on Successful Presentation Strategies, Los Angeles. (Repeat seminars June 23, Chicago; June 25, Boston.) Contact: Professional Services Management Journal Seminars, 45 Van Brunt Ave., Dedham, Mass. 02026.

June 24-26: Seminar on Passive Solar Design—Strategy Comparisons, Cornell University, College of Architecture, Art and Planning.

June 25-26: AIA Energy in Design: Practice Workshop, Richmond. (Repeat workshop July 9-10, New York City). Contact: Brenda Henderson at Institute headquarters, (202) 626-7353.

June 28-30: Course on Energy Auditing for Light Commercial Buildings, University of Wisconsin, Madison, Department of Engineering and Applied Science.

July 8-9: AIA Energy in Design: Techniques Workshop, Kiawah Island, S.C. (Repeat workshops July 14-15, Lake Tahoe, Nev.; July 28-29, Atlantic City, N.J.) Contact: Brenda Henderson at Institute headquarters, (202) 626-7353.

LETTERS

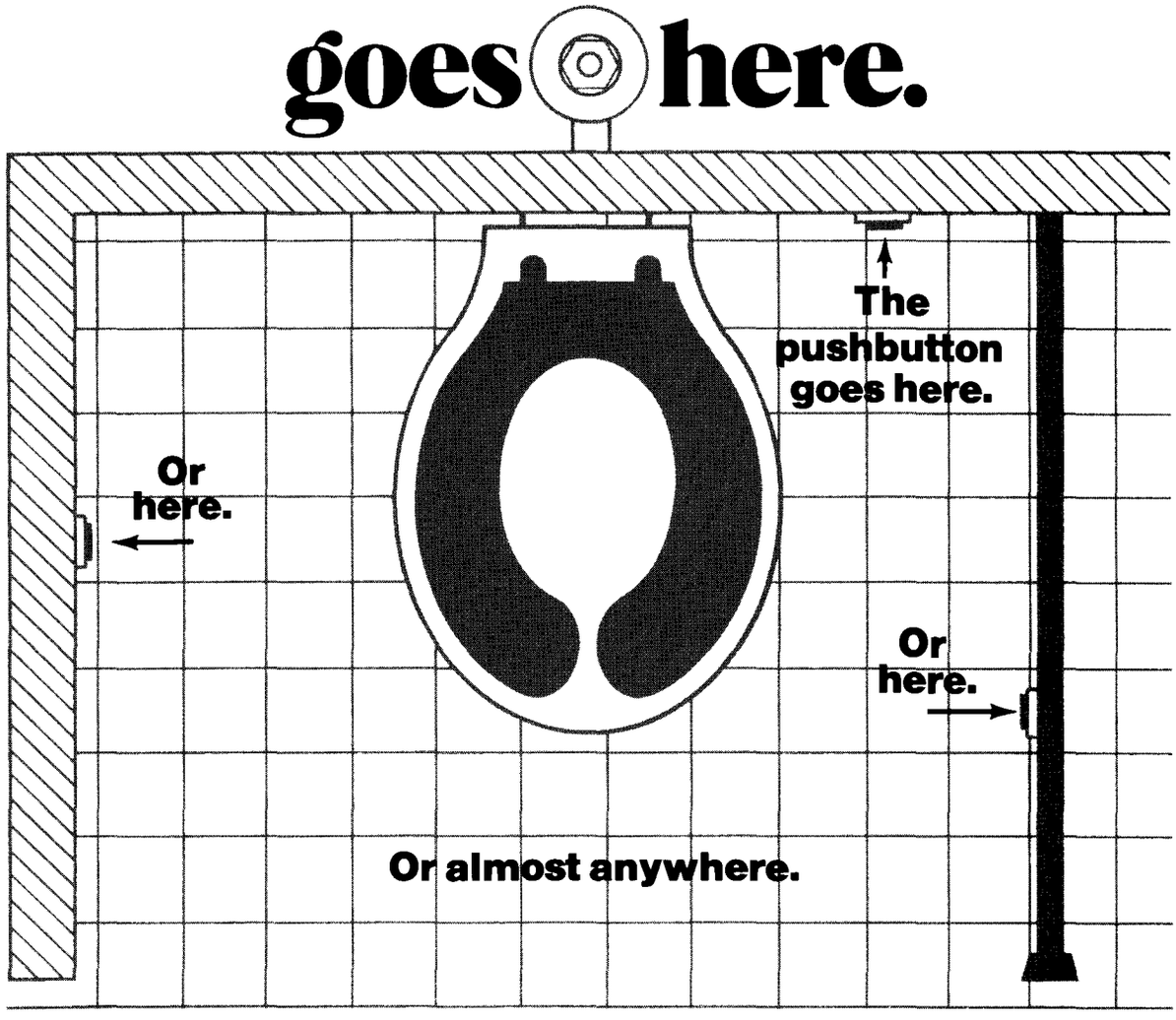
Construction in Hawaii: I had returned from Hawaii less than a week when the JOURNAL's March issue arrived. While the business of architects is building and your choice of subjects for this publication prior to the convention was excellent, you should by all means advise the members that the most important and beautiful construction they can see on the island is by mother nature.

Look at Honolulu as you would any city, but rent a car and see all of the island, from Bellows to Kolekole Pass, from Makaha surfing to Kaena Point, from the Botanical Gardens to the Crouching Lion, from Kaneohe Bay to Tantalus and all points in between. *David Tompkins, AIA*
Gastonia, N.C.

James Reinhardt's article, "Climate-Bred System of Housebuilding" (March, page 94), says, 'When the missionaries arrived in the early 1800s they brought with them the traditional New England balloon frame construction. . . ." As an amateur in architectural history I have gleaned that balloon frame construction was a development of the 1830s in and around Chicago. Since the missionaries arrived first in Hawaii in the 1820s, it would seem unlikely that they would have introduced balloon framing at that time, and that any "New England" building they put up would have been of an earlier type more reliant on larger structural timbers.

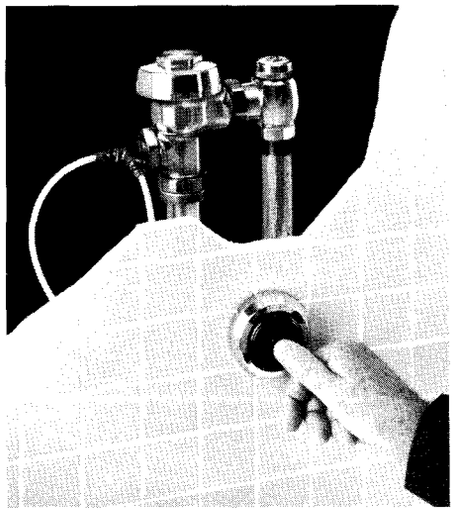
Richard W. Price
San Francisco

The flush valve goes here.



The new Sloan Series 900 hydraulic flushing system locates the pushbutton for maximum convenience.
And only one trade—the plumber—is needed for installation. Almost any type of new construction can now be equipped with remote pushbutton hydraulic flushing for both urinals and closets.
No external power source, no wire, no transformer is needed.

Installation is simple, because just one valve fits all roughing-in requirements. The Sloan pushbutton installs through walls up to 8" thick.



Count on the traditional Sloan water-saving benefits, too. Push the button once, the valve flushes only once, even if the button is held down.

The Sloan Series 900 hydraulic flushing system is ideal where pushbutton convenience and go-anywhere location are needed. In schools. In hospitals. And in high-traffic areas, where the reduced maintenance of hydraulics is an added benefit.

Location versatility. Hydraulic reliability. Sloan quality. All brought together in our Series 900 hydraulic flushing system. For full details, please write.

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NEWS

Awards

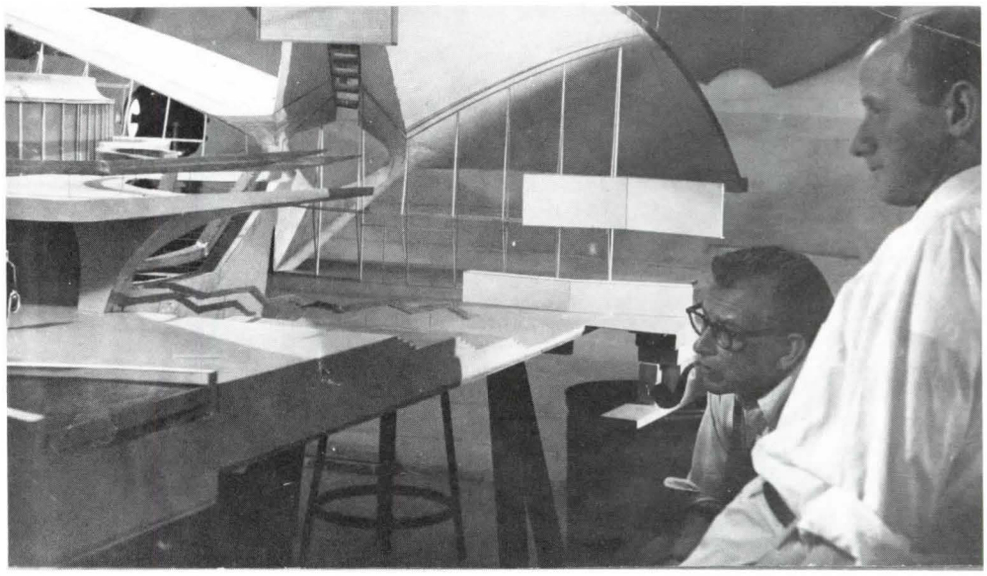
Roche Wins Pritzker, Endows Saarinen Chair

Kevin Roche has been named the fourth recipient of the Pritzker architecture prize. He will donate the $100,000 award to Yale University to help endow a professorship in architecture honoring Eero Saarinen, with whom he was a partner for 11 years.

Of Roche's approach to architecture, C. Ray Smith wrote in *Contemporary Architects* that Roche "demonstrates a kind of problem solving for each specific situation that has produced works of distinct individuality and stylistic variety from project to project." It is an approach once explained by Roche's partner, John Dinkeloo, who died last June. Said Dinkeloo, "A building problem is a prod toward a direction. Finding that direction precedes design—or, more properly, it *is* design."

Speaking of his recent design of a headquarters for General Foods in Rye, N.Y., Roche says, "It is not postmodern or premodern. It is simply the most obvious thing I could have done. It is an important center of economic activity. The design began with a need, and it addresses the problem of accommodating office workers in a suitable environment. I think the public will identify with it."

J. Irwin Miller, a Pritzker juror and client for three Roche-designed buildings, as well as for a Saarinen building on which Roche worked closely, says that, like Saarinen, Roche's approach is always to understand the building problem in depth "before even thinking about design." This is one of Roche's great talents, says Miller, and "natural to his disposition. As the use of a building evolves in the process of discussing a design, I can see his own concept of design change too."



Eero Saarinen and Kevin Roche (far right) with model of TWA terminal in the '50s.

Born in Dublin, Ireland, in 1922, Roche received his degree from the National University of Ireland, emigrated to the U.S. in 1948 and became a U.S. citizen in 1964. Upon arriving in the U.S., he did graduate work at the Illinois Institute of Technology, where, he has said, he was strongly influenced by Mies van der Rohe. Roche joined Eero Saarinen's firm in 1951, as did Dinkeloo, and was made Saarinen's principal associate in design three years later. Upon Saarinen's death, Roche and Dinkeloo completed 10 major projects then under construction or on the boards, including Dulles Airport, the St. Louis arch and headquarters buildings for CBS and Deere & Co. Kevin Roche John Dinkeloo & Associates was formed in 1966.

In the almost 21 years since Saarinen's death, Roche has designed 51 major projects. Partner Dinkeloo was head of production, as he had been for the Saarinen office. Their first big commission was for the partially earth-covered, terraced Oakland Museum. Perhaps the firm's best known work is the Ford Foundation headquarters in New York City, which was 14th in the JOURNAL's bicentennial poll on the best American architecture of 1776-1976, and at age 9 the newest building among the leaders in the polling. Headquartered in Hamden, Conn., Roche Dinkeloo won AIA's architectural firm award in 1974.

Roche joins Philip Johnson, Luis Barragán and James Stirling as winners of the Pritzker, the richest world architecture prize. Jay A. Pritzker, whose family business interests include publishing, real estate, electronics, timber and mining, as well as the Hyatt hotel chain, set up the Hyatt Foundation in 1979 to administer the prize. It is given annually to a living architect or architectural group "whose work demonstrates a combination of talent, vision and commitment that has produced a consistent and significant contribution to humanity and the environment."

The Pritzker jurors this year were J. Carter Brown, director of the National Gallery of Art, Washington; British author and art historian Kenneth Clark; Japanese architect and critic Arata Isozaki; Philip Johnson; J. Irwin Miller; Cesar Pelli, FAIA, dean of Yale's school of architecture, and Thomas J. Watson Jr., chairman emeritus of IBM. Arthur Drexler, director of the department of architecture and design of the Museum of Modern Art, was competition adviser.

Awards continued on page 10

Awards *from page 9*

AIA Honors 8 New Buildings And 4 Extended Use Projects

This year's Institute honor awards go to eight recent buildings, three extended use buildings and a rehabilitated Victorian neighborhood. The awards will be conferred at the AIA convention in Honolulu next month, and the winning buildings will be presented in the JOURNAL's fifth annual review of new American architecture later this month.

Selected in the current use category are:

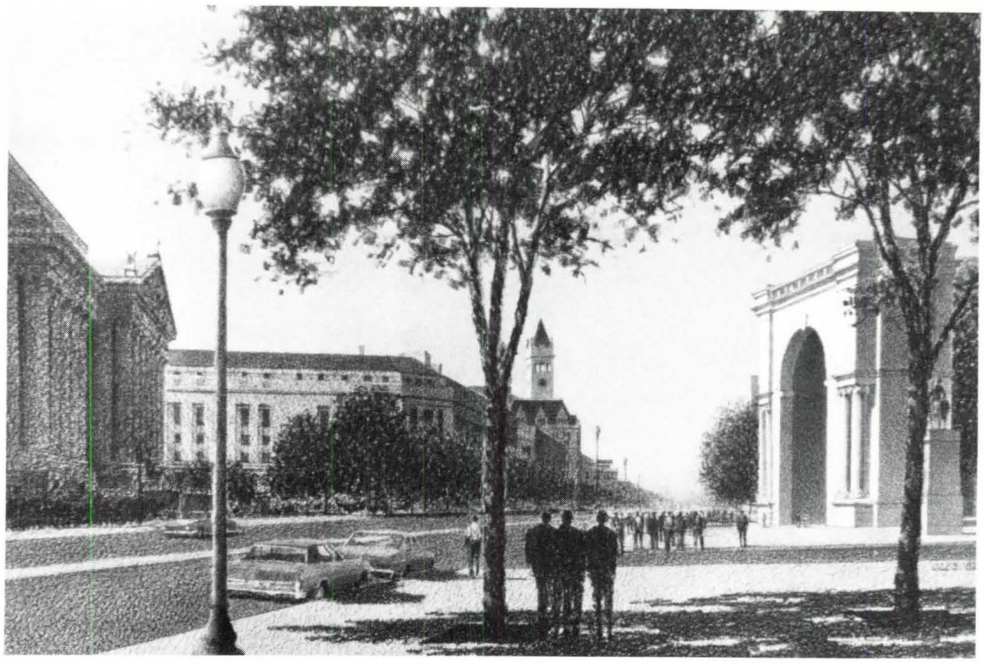
- LeJeune residence, Orono, Minn., by Frederick Benz/Milo Thompson/Robert Rietow, Inc., Minneapolis.
- Illinois Regional Library for the Blind and Physically Handicapped, Chicago, by City of Chicago Architect Joseph W. Casserly and Stanley Tigerman & Associates, consulting architect, Chicago.
- A house in East Hampton, N.Y., by Eisenman Robertson Architects, New York City.
- Garfield Elementary School, San Francisco, by Esherick Homsey Dodge & Davis, San Francisco.
- Lath House at Heritage Square, Phoenix, by Robert R. Frankeberger, AIA, Phoenix.
- Macondary Terrace, San Francisco, by Hood Miller Associates, San Francisco.
- American Academy of Arts and Sciences, Cambridge, Mass., by Kallmann, McKinnell & Wood of Boston.
- Talbot house, Nevis, West Indies, by Taft Architects, Houston.

Members of the current use panel were Joan E. Goody, AIA, chair; Howard Barnstone, FAIA; Thomas H. Beeby, AIA; architecture student Gary Chan; John O. Merrill Jr., FAIA; Jay C. McAmis, an AIA associate member, and Robert Venturi, FAIA.

The extended use winners are:

- Schulman house addition, Princeton, N.J., by Michael Graves, FAIA, Princeton.
- Valley National Bank, Des Moines, by Charles Herbert & Associates of Des Moines; (original project architect: Proudfoot, Rawson, Souers & Thomas, now Brooks, Borg & Skiles, Des Moines).
- Curtis Park Face Block Project, Denver, by Long Hoeft Architects and McCrystal Design, both of Denver.
- *Scoville Square* Building, Oak Park, Ill., by the Office of John Vinci Inc., Chicago.

Jurors for extended use projects were Frank O. Gehry, FAIA, chairman; Bruce A. Abrahamson, FAIA; Dora P. Crouch, associate professor of architectural history; Mark Lowe Fisher, associate AIA member; architecture student Pamela Jenkins; Nory Miller of *Progressive Architecture,* and Peter Papademetriou, AIA.



Government

Naval Arch Plans Move Ahead; Federal Triangle Scheme Shown

Sponsors of an "Arc de Triomphe" for the north side of Pennsylvania Avenue in Washington are forging ahead with design refinements and fund-raising, despite negative reaction to the concept by the staff of the National Capital Planning Commission, whose approval is required. Meanwhile, GSA has unveiled an ambitious master plan for the Federal Triangle, the office enclave bordering the south side of the avenue between the Capitol and White House.

The arch (above right), a Navy memorial, would stand in Market Square at the foot of the planned Eighth Street corridor, an area of mixed uses, and across the avenue from the National Archives (see March, page 21). Acoustical panels would drop from within the arch to form a back drop for band concerts, and the attic would contain Navy exhibits. Its architect, Conklin Rossant, showed a 112-foot-high version of the arch in February to the District of Columbia Fine Arts Commission, which approved the concept but recommended modifications, including making it more "clunky," as Chairman J. Carter Brown put it.

The planning commission was to see the same proposal last month, but the Navy Memorial Foundation withdrew its presentation at the last minute after the planning commission staff criticized its scale, siting and "incompatible functions," and suggested an entirely different approach to a memorial/band shell. The report said, in part, that the arch would overpower Market Square and compete with the dominance of the National Archives facade, and would destroy the vista on Eighth Street between the archives building and the National Portrait Gallery. Recommended was a performance facility of reduced scale, placed off the Eighth Street axis. A report by the Joint Committee on Landmarks, which serves the planning and fine arts commissions and the District of Columbia government, reached similar conclusions. The board of the Pennsylvania Avenue Development Corporation, whose jurisdiction includes Market Square, has not yet formally considered the arch, although its staff is working closely with Conklin Rossant.

A spokesman for the Navy Memorial Foundation said a reworked proposal for the arch, incorporating some of the suggestions of the fine arts commission, is to be presented to the planning commission this month. "We have every intention to go forward with the arch concept," he said. The foundation has selected sculptor Stanley Bleifeld of Weston, Conn., to do the bas-reliefs on the arch and to design a large fountain, also in Market Square. About $750,000 has been collected toward a goal of $12 million, said the spokesman, who anticipates a final design this October and completion of the arch, plaza and fountain by mid-1984.

Meanwhile, if the General Services Administration's master plan (by Harry Weese & Associates) for the Federal Tri-

continued on page 12

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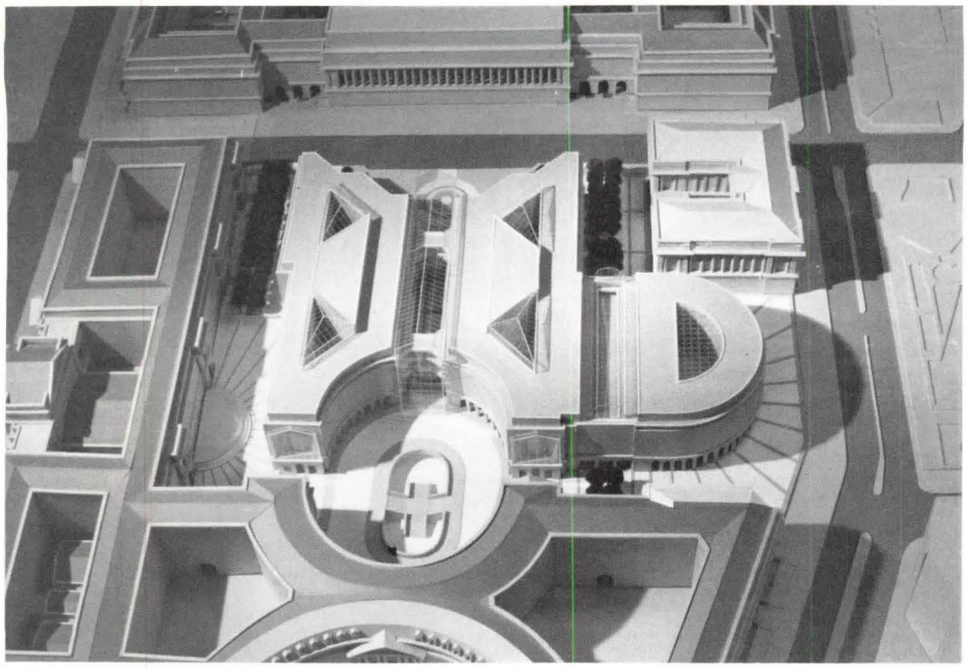

Model shows proposed massing of new Federal Triangle building.

Government *from page 10*
angle is approved by the fine arts and planning commissions and funded by Congress, uses of the tightly knit government office precinct would be diversified and intensified, and a limited competition would be held to select a designer for its last unbuilt section.

Planned is a massive office/commercial building for an L-shaped site fronting Pennsylvania Avenue at the Venturi/Patton Western Plaza and wrapping around the Beaux-Arts District of Columbia government building to 14th Street. Now used as a parking lot, the large site was designated in a 1930 plan as the location for a "Great Plaza," but construction on the Federal Triangle was halted in 1938, and the plaza remains unrealized. The proposed building would contain seven floors of office space over three more of mixed uses, and this plan for the lower floors would re-enforce mixed uses in the old post office in the next block.

Cutting through the new building west to east would be a high, glazed galleria that would provide a permanent exhibit area for collections from the National Archives. This pedestrian link from 14th Street would be part of a proposed "federal walk" extending to the rehabilitated old post office (to reopen next year) and beyond to the triangle's eastern point. Penetrating the neoclassical buildings, the walk would link points of public use—"important destinations," in the words of the Weese plan—to include exhibits, historic collections and displays of state and federal governments nestled in existing courtyards and under arcades.

The plan also recommends enhancing pedestrian linkages on all sides of the triangle by opening portals for pedestrians through existing vehicular courtyards and by landscaping the north-south streets for visitors and tourists. As Robert J. Karn, AIA, of the Weese office said at a press briefing, the object is to mitigate the existing "Chinese wall" effect between Washington's Mall and commercial district north of Pennsylvania Avenue.

For the new building, planned at a million square feet of office space and 326,000 square feet for mixed uses, David R. Dibner, FAIA, head of GSA design and construction, says he hopes to hold a limited competition late this year "to select a designer, not a design. We will advertise nationwide, select six firms or teams, give them five or six weeks to come up with specific proposals and select one based on demonstrated creativity, sensitivity to the historic area and response to our needs. We do not expect to get a finished design in six weeks." Dibner estimated construction cost for the new building at $350 million and completion in five to six years.

Asked the thorny question of whether he was looking for classical or modern design for the new building, Dibner smiled and said, "We would hope for a design that reflects today and respects yesterday."

Report on Retrofits Finds Resistance to Long-Term Approach

Energy retrofits of buildings in urban areas could result in savings of up to seven quads of energy per year (an equivalent of 3.5 million barrels of oil per day per year), concludes a report by the Congressional Office of Technology Assessment. The cost of most of these retrofits would be recovered in energy cost savings in less than seven years and in many cases yield annual returns greater than 30 percent, the report continues.

However, the authors of the report, "Energy Efficiency of Buildings in Cities," are less optimistic about what may actually happen. They suggest that nearly four quads of this potential energy savings may not occur due to the uncertainties of the benefits of retrofitting, the high cost of borrowing money for building improvements and the disinterest of some building owners of making a long-term financial commitment.

Currently, the vast majority of building owners are limiting investments in energy retrofits to those that pay back in two years or less, the authors maintain. One major reason is that for most types of commercial and multifamily building owners, loans for property improvements are available only at high interest rates and for short terms. Therefore, "only building owners with good access to capital, good professional property management advice and a long holding strategy are making building energy efficiency investments up to seven year paybacks," the report says.

As for other groups that may stimulate investment in energy retrofits, the authors conclude that few utility companies or city governments will undertake "ambitious large-scale" energy retrofit programs.

However, many cities have incorporated energy retrofit into their housing rehabilitation programs. A few cities have successful programs: In Portland, Ore., a residence must meet certain energy efficiency standards set by the city at the time of its sale; in Minneapolis and Baltimore, the city government issues municipal bonds to subsidize private retrofit expenditures, and in Des Moines, Iowa, the city government runs a weatherization program.

The outlook for state help is mixed. Some states, such as Florida, California, New York, Minnesota and Massachusetts, have significant programs for promoting retrofits or energy audits, while other states have failed to look at the problem. And the federal government, after years of steadily increasing its involvement in energy conservation, is now reducing its efforts.

The authors considered commercial and multifamily buildings, housing occupied by low-income people and single-family houses located in central cities. This group of buildings used 14 quads of "primary" energy in 1980, half of all the energy used by buildings in the U.S. that year. The types of retrofits considered were improving the efficiency of the building envelope, changes to mechanical systems and changes in building use (such as controlling temperature and lighting or commercial buildings between operating and nonoperating hours). The report was prepared by OTA on the request of the House committee on banking, finance and urban affairs.

News continued on page 14

A luxurious hotel in Louisville.
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Organizations

Home Builders, Sierra Club Find Common Environmental Goals

After more than a year of negotiations, the National Association of Home Builders and the Sierra Club have issued a joint statement on land use "to promote decent, affordable housing in a sound environment."

The builders and the protectors agree to encourage:

- "building of needed housing as 'infill' on appropriate vacant land within urban and adjacent suburban areas at densities sufficient to encourage cost-effective transit service;
- "compatible mixes of housing, commerce and industry;
- "energy efficient building designs and water conservation measures;
- "development of adequate, cost-effective transit service;
- government acquisition (with fair and equitable compensation) of parks and open spaces."

These development patterns would "conserve energy, water, land and building materials," the statement continues. "Such patterns would improve air quality and make better use of existing urban infrastructure. Additionally, these patterns would reduce development in forest lands, agricultural lands, wetlands and other natural areas.

"We urge neighborhood leaders and groups, builders and planning officials to cooperate to produce projects which respond to community needs and which respect existing neighborhoods. After assuring this cooperation, we urge state and local governments to improve permitting processes by specifying development requirements in advance, by coordinating review times when projects are proposed, and by eliminating unnecessary delays and duplicative review.

"We further encourage local governments to adopt incentives and development standards which promote more efficient land use through higher densities and through cost-effective site design for infill areas."

Larry McBennett of the home builders association credits a changing market in housing as a big factor in development of the joint statement, adding that he doubts that such a conciliatory document would have been possible five years ago. The changes include downsized houses and clustering brought about by increased energy and building costs. Sierra Club President Joe Fontaine of San Francisco also credits builders' increased awareness of environmental issues.

ACEC and NSPE Work Out Outline for Planned Merger

The American Consulting Engineers Council and the National Society of Professional Engineers will merge to form "The Consulting Engineers Council of the National Society of Professional Engineers" if the two engineering societies approve recommendations of a joint committee.

The committee of eight—four from each existing engineering society, including their presidents—has drafted a plan to be presented to ACEC at its meeting this month and to NSPE at its July meeting. Approval is required by the directors and memberships of both organizations. ACEC, with 3,800 member firms, deals solely with the business interests of the private practitioner; NSPE represents some 80,000 individual engineers and deals with issues related to education, government, industry and construction, as well as business practice. Both are headquartered in Washington, D.C.

Recommended is the creation of a new

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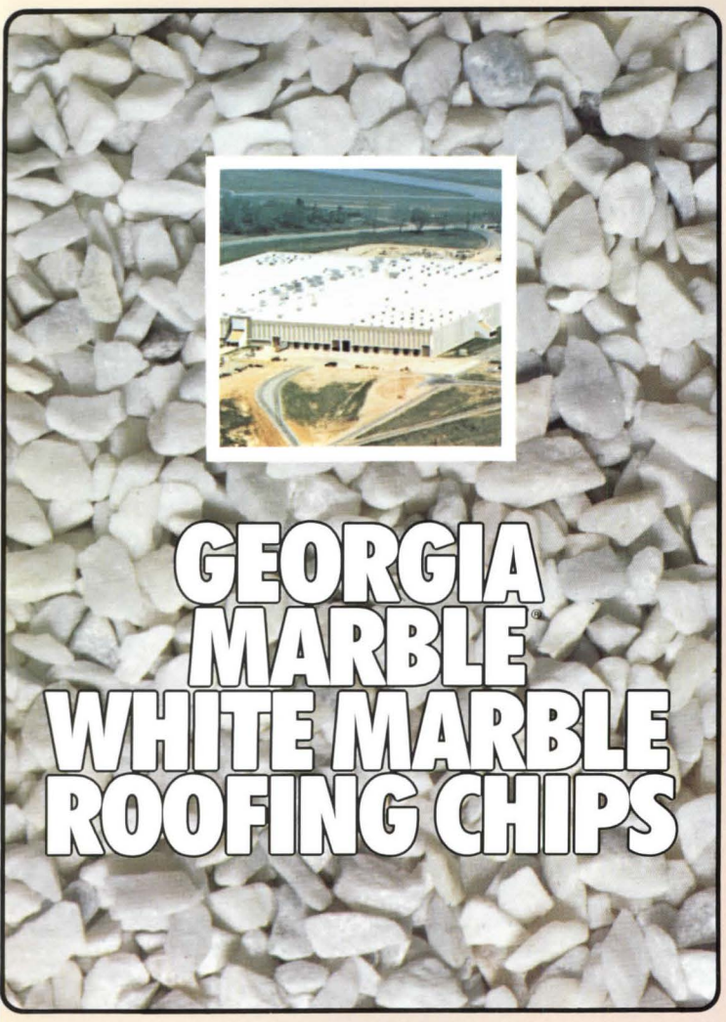

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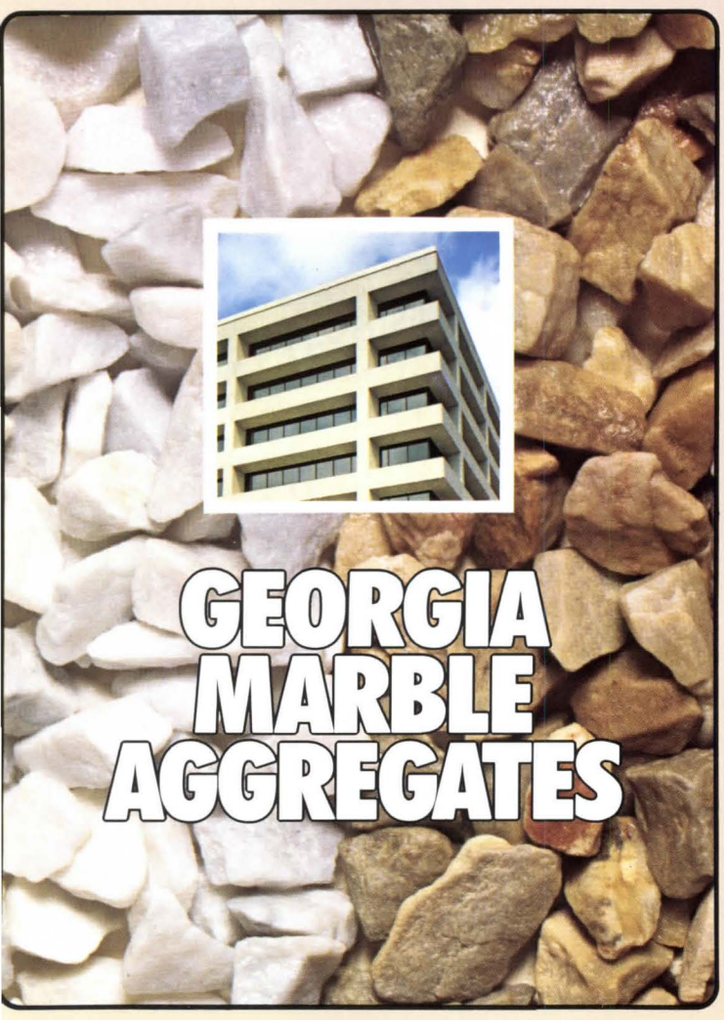

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Organizations *from page 14*
entity, a council, structured as a part of NSPE. The council would represent the private practitioner on the NSPE executive committee and the NSPE board of directors.

The council would be composed of member firms, principal members and individual members, according to the committee's recommendations. To qualify, member firms must meet five criteria relating to business practices. Principal members may be either principals in member firms or in firms not eligible for membership. An individual must be a graduate and/or licensed engineer or a surveyor of a professional engineering and/or surveying organization, and a member of NSPE.

Officers of the council would be a president, a president-elect, the immediate past president and six regional vice presidents, one from each of NSPE's regions.

The affairs of CEC/NSPE would be overseen by a board of trustees consisting of representatives from state organizations. Existing NSPE and ACEC staffs would be consolidated and function under an executive director.

Economy of operation is the first mentioned rationale for the merger. ACEC and NSPE failed to agree on a merger in two earlier sets of discussions, in 1965 and 1972.

Sequels

Detractors of Memorial Design Named to Guide Modifications

The directors of the Vietnam Veterans Memorial Fund have selected a panel of four veterans of the war, including two outspoken critics of the competition-winning memorial concept, to make esthetic decisions regarding the new elements—a statue and a flagpole—to be incorporated into the simple design chosen a year ago. Meanwhile, site work in Washington proceeds for the memorial as designed and approved.

Opponents of the design, by Yale undergraduate Maya Lin, won concessions adding the two new elements just before ground was broken in late March (see April, page 46).

The panel is to select a sculptor and a sculpture of a serviceman, specify its placement and that of the flagpole and decide the "patriotic" inscription or inscriptions to be placed on the new elements. None of the four have art or architecture backgrounds, although Kent Cooper, FAIA, the memorial's architect of record, and others yet unnamed will be made available as professional advisers, according to Robert Doubek, VVMF project director. Final approval must come from the District of Columbia Fine Arts Commission, the National Capital Planning Commission and the Interior Department.

The four are James Webb, a lawyer and author of two war novels, who has called Maya Lin's design "a mockery" that will become "a wailing wall for future antidraft and antinuclear demonstrations"; Milton Copulous, also an opponent of the design and a staff member of the Heritage Foundation, the conservative public policy organization, and William Jayne and Arthur Mosley, volunteer advisers to the fund since 1979 who support the original design. Jayne is the deputy director of the Vietnam veterans leadership program for the ACTION agency of the federal government. Mosley is a real estate developer in Key West, Fla.

Inscriptions under consideration include

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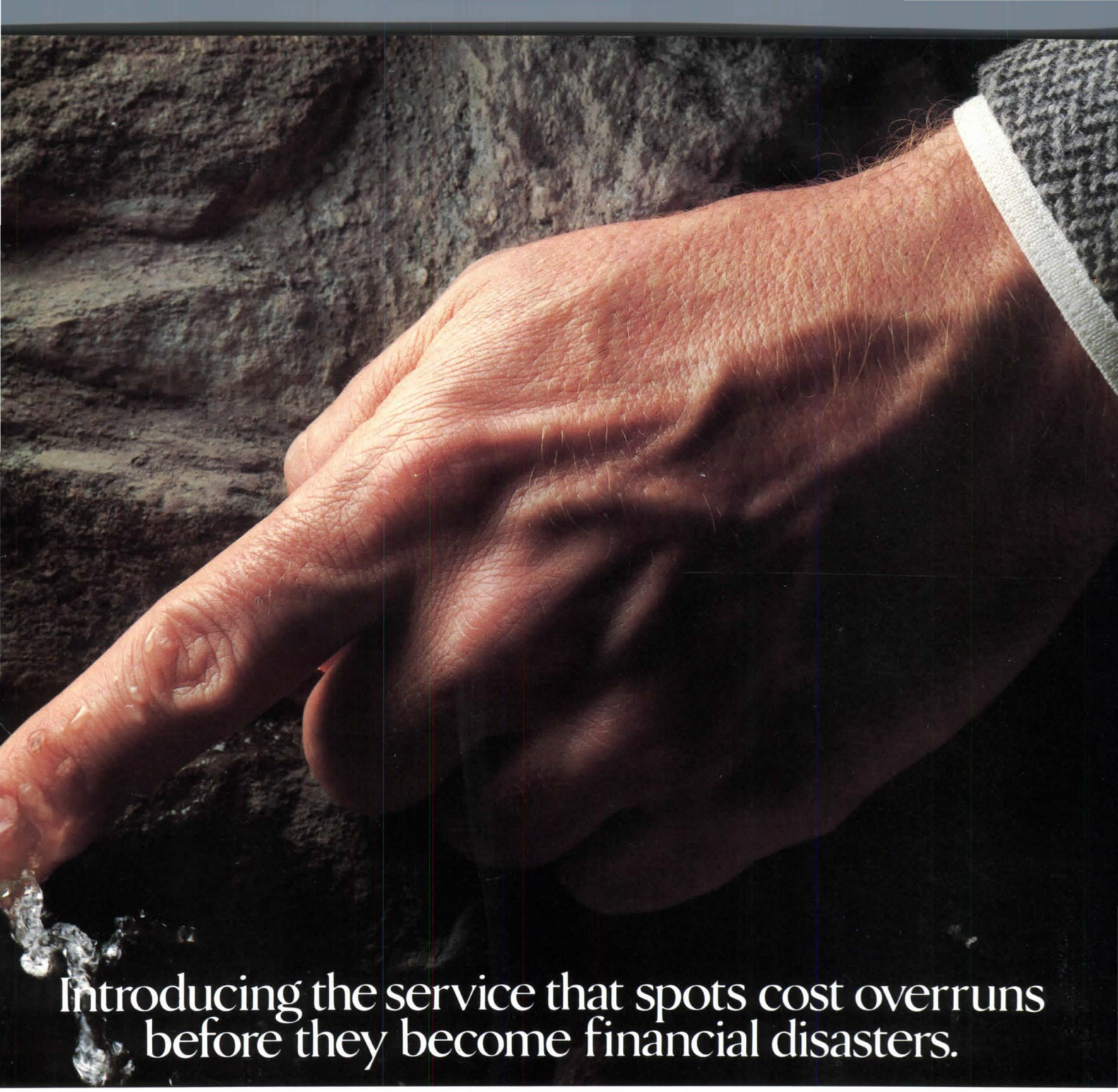

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Sequels *from page 16*
the words of Senator Jeremiah Denton of Alabama, who said upon release as a prisoner of war: "We are proud to have had the opportunity to serve our country under difficult circumstance. God bless America." Also, "For those who have fought for it, freedom has a flavor the protected will never know," an anonymous quote said to have been written on a bunker during a major battle of the war.

At the memorial site in Constitution Gardens near the Lincoln Memorial, excavation has been completed. Doubek says foundation work is to begin by the middle of this month, and the concrete walls are to be poured by mid June. The black granite slabs to front the walls are being cut and polished in Barre, Vt., and sent to Memphis for inscription of the names of the war dead and missing, plus a brief message explaining the memorial.

Stirling's Fogg Gets Go-Ahead

Plans to build James Stirling's much-studied addition to Harvard's Fogg Museum are on again after being canceled because of money problems. Stirling's L-shaped building with three gallery floors and five office levels will flank the present Fogg on Harvard Yard.

After several years of solicitation, the university had raised $7.5 million of the estimated $7.8 million construction costs. But groundbreaking was delayed last November as museum officials sought more funds. In January, it was reported that the university might sell some of the museum's less-valuable works, a plan that drew criticism from within the university, from the Association of Art Museum Directors and from others. Two weeks later, Harvard President Derek Bok announced cancellation of the project, citing fear of construction cost overruns and reservations about the proposal to deaccession artworks. Bok relented when the museum's visiting committee resolved to raise $3 million, plus $3 million more over the next three years.

New York Theaters Demolished

With the demolition of New York City's Morosco and Helen Hayes theaters and the signing of documents on a complex financing package, construction of John Portman's massive Times Square hotel is all but assured.

The last obstacle to demolition fell March 22 when the Supreme Court lifted a temporary stay. Demonstrators, including prominent actors who had played the 81-year-old Morosco, were arrested when they refused to leave the site, ending a two-week protest during which actors did marathon readings of plays presented at the two theaters.

In Celebration of 125 Years—A marching band, clowns, barbershop quartet, Trinidad steel band, bluegrass musicians, street mimes, marionettes and African dancers and drummers enlivened the AIA headquarters courtyard during a week-long celebration of the Institute's 125th year during the week of April 18-24. Inside the building, an archival exhibit of items documenting AIA's growth and achievements was open to the public. The display, to remain in place through July, includes the long-lost sheepskin constitution and bylaws signed by 49 founding AIA members on April 15, 1857. During the week, AIA was host to architects from around the country and abroad, and a large cake shaped like the Octagon was cut and shared with guests. Also as part of the celebration, Washington Mayor Marion Barry proclaimed "architecture week" in the nation's capital, and area buildings that have won design awards or have historical significance were festooned with large blue and purple banners.

News/The Institute

Direction '80s, Nuclear Stand On Convention Business Agenda

At its spring meeting in Orlando, Fla., AIA's board of directors selected Orlando as the 1987 convention city, adopted two resolutions favoring preservation of the St. Bartholomew's Church complex in New York City and accepted a slate of resolutions to be brought before the national convention next month in Honolulu.

Resolution subjects range from the Direction '80s task force (see April, page 11) to nuclear disarmament. The two resolutions relating to Direction '80s were authored independently of the task force, which will seek adoption of its report and ask the board to give first priority to the implementation of its goals.

Prior to the convention the full Directions '80s report is being sent to all components, and the core section on goals and responsibilities is being sent to all members.

All of the resolutions come from California. The following have been proposed by the California Council/AIA:

- That AIA, in implementing the findings of the Direction '80s task force, engage only in activities relating to national legislative and regulatory advocacy, public awareness, membership communications and contract documents, and act as a clearinghouse for a body of knowledge and component programs. Further, that by limiting its dues-supported programs to the above, AIA reduce the national membership and supplemental dues obligations of its members.
- Also in regard to the Direction '80s report, that (1) national AIA reduce its programs and redirect its staff and resources to focus on matters of national, public and professional interest, (2) that local AIA components become the primary resources for member programs and activities related to the practice of architecture and (3) that the state/regional AIA components become the coordinating organizations between national and local components and conduct such programs as administrative services; state legislative, regulatory and policy issues, and serve as clearinghouses for local chapter programs.
- That AIA's budget format be changed to show all direct expenses, membership reimbursements, Service Corporation charges, staff costs and overhead attributable to each program and/or activity over $10,000, as well as all sources of revenue anticipated to offset such expenses; and that this new budget format be ready for presentation and use at the 1983 grassroots conference.
- That AIA set up a task force to study the issues of education, training requirements, internship, examinations and reciprocal registration facing the profession, the National Council of Architectural

continued on page 66

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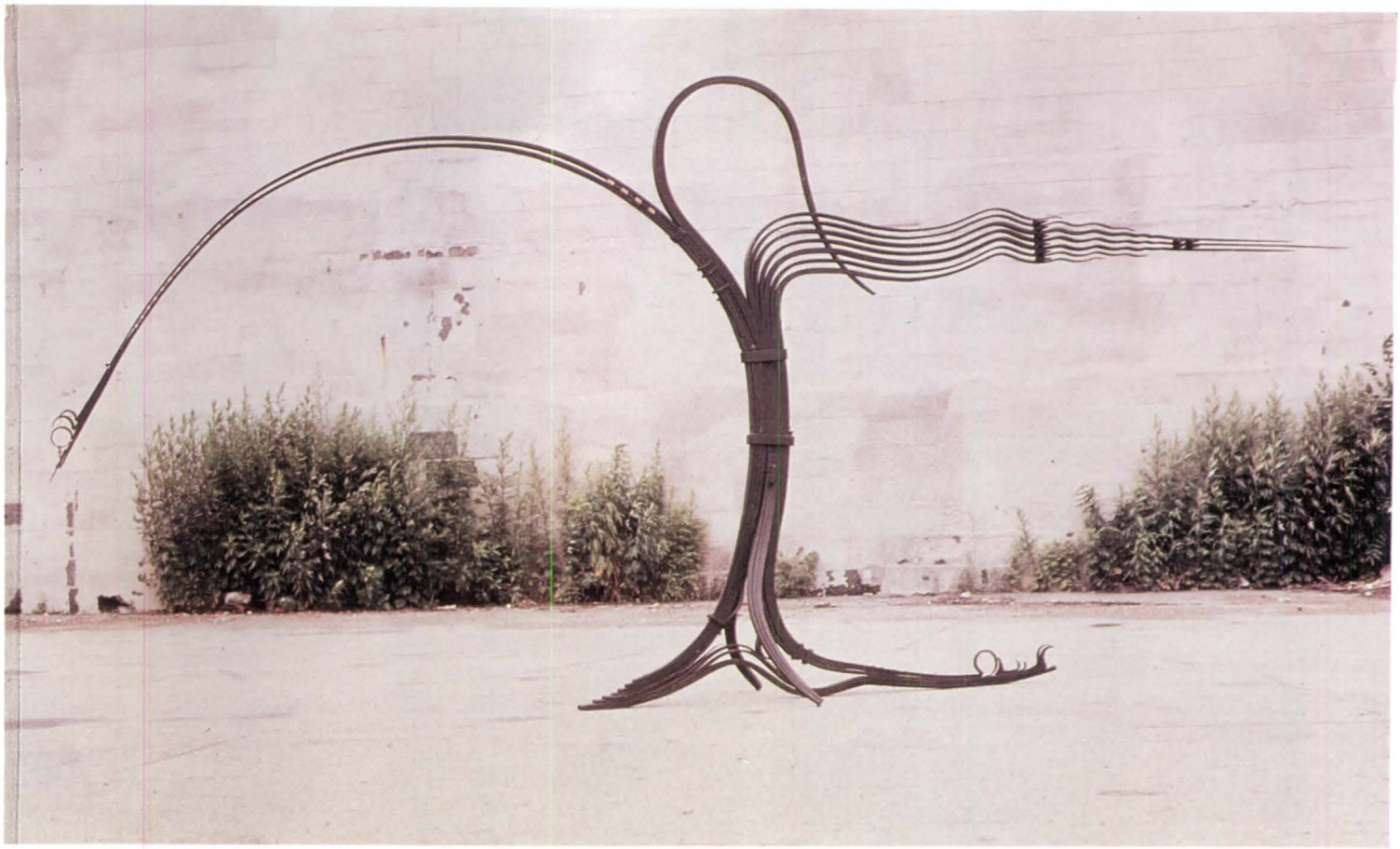


Photographs courtesy of Fendrick Gallery

Bruce Miller

The Arts

Sensuous, Whiplash Forms By Metalwork Master Paley

Albert Paley is one of the major players in the renaissance of architectural metalwork as an American art form. He has taken rigid, inflexible iron and has curved, banded, compressed and swirled it as one casually molds clay. And in the process, he has created a new vocabulary for the craft.

As a student at the Tyler School of Art in Philadelphia (between 1962 and '69), Paley began as a goldsmith, constructing large, often very complex and sculptural pieces of jewelry. His first architectural commission was in 1974 for the Renwick Gallery gates in Washington, D.C. The design of the three-quarter-ton, copper, brass and bronze gates reflects that of Paley's jewelry in the richness of materials, density and interconnected forms.

Architectural metalwork as an art form in America declined after the death of the master architectural metalsmith Samuel Yellin of Philadelphia in 1940. Paley has been a leader in its revival. Since his transition from goldsmithing to metal work, Paley has designed numerous lecterns, gates, railings, fences, plant stands, abstract works, among others. One of his current major commissions is the design of 50 round benches and 460 tree grates for the Pennsylvania Avenue Development Corporation, Washington, D.C.

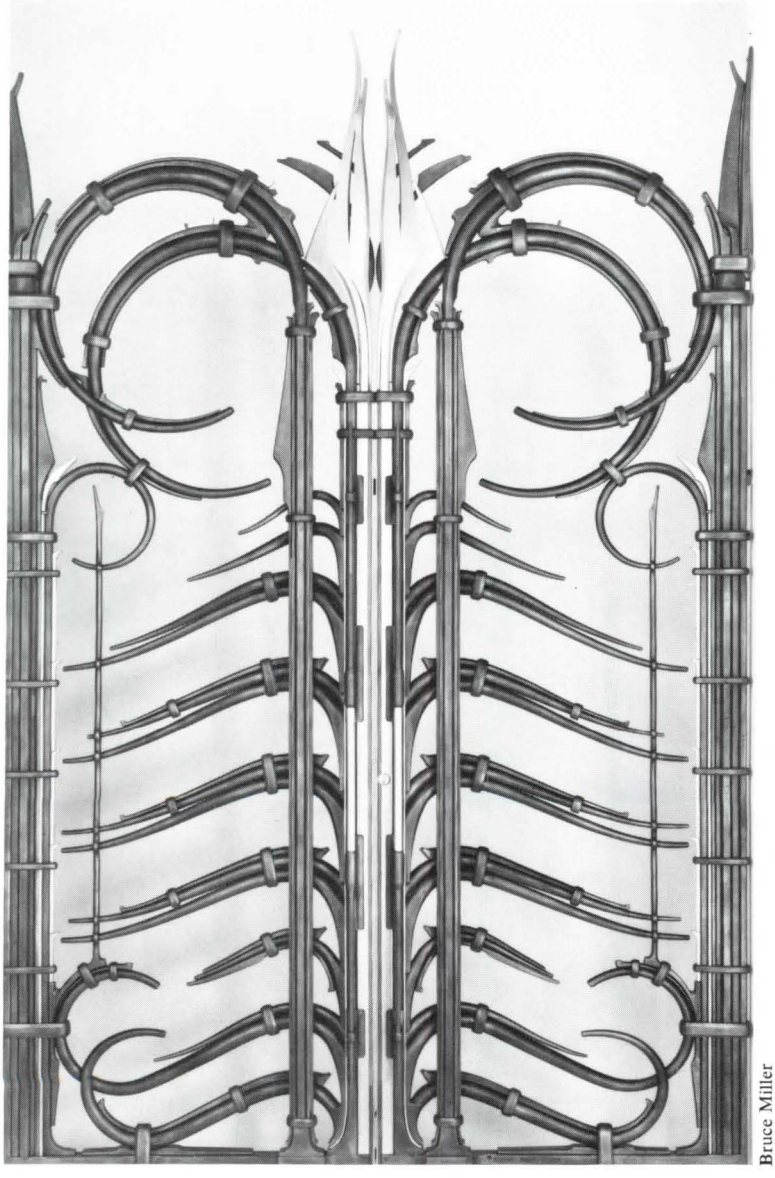
In reviving the craft, Paley deliberately set out to establish his own style. As he told the *Washington Post:* "People ask me if the whiplash forms I use often come from the art nouveau period. I explain that the shape comes about because when the iron is hot it has a great deal of natural movement. It just flows into curves, and when it is cooled, you've frozen the motion."

Those "dance-like-movements in metal" are clearly evident in Paley's work as it has evolved from the massive, heavy, almost Baroque Renwick gates to the sensual free-formed elegance and lightness of such works as the fence at the Hunter Museum of Art in Chattanooga, Tenn. (The fence has been described as metal rambling and swirling in a playful rhythm so that it seems more like a sketch or calligraphic design than a rigid steel structure.) And, too, Paley has said that the whole purpose of architectural ornamentation is to bring accent and focus to architecture.

Bruce Miller

Bruce Miller

Among Paley's works are an abstract iron form (1974, of mild steel and brass, forged and fabricated) and two plant stands (1981, mild steel, forged and fabricated), facing page. Clockwise beginning above is a wrought iron and glass dining table (1977), a detail of the Albany Gates and the Albany Gates (1980, mild steel, brass, bronze, 13½x9 feet for the State of New York Senate chambers) and a detail of a bannister (mild steel, forged and fabricated, 1981).



Bruce Miller

Photographs courtesy of Fendrick Gallery

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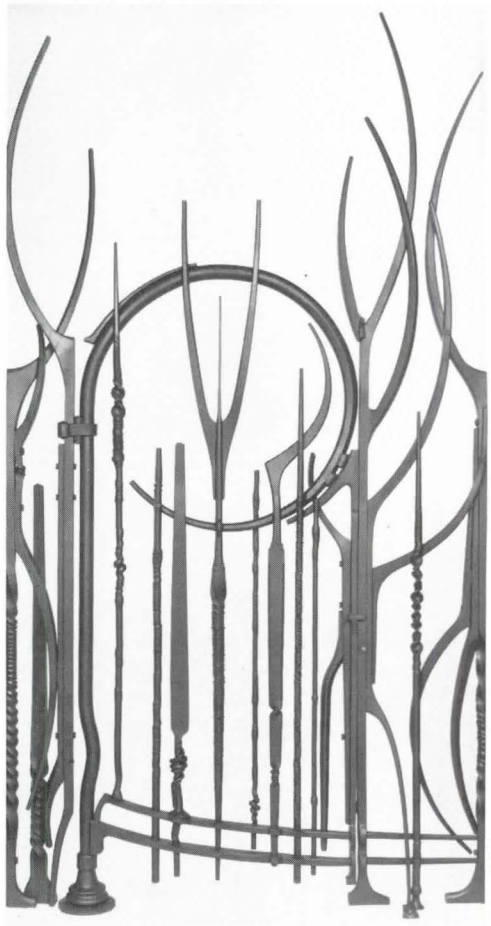
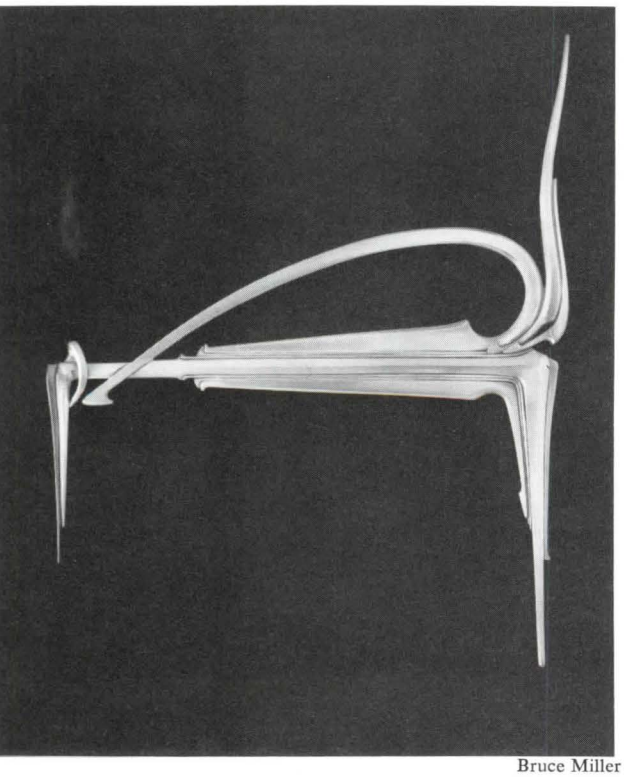


Bruce Miller

Wrought iron fence at the Hunter Museum of Art (1974) measures 121 feet, above left. Below that, a model of an exterior sculpture (1981) to be hollow Corten steel 14x20 feet. **Top**, *detail of a clock (1980, forged and fabricated mild steel) and a mild steel gate (1981) for a private residence in Washington, D.C., above.*

John Tennant



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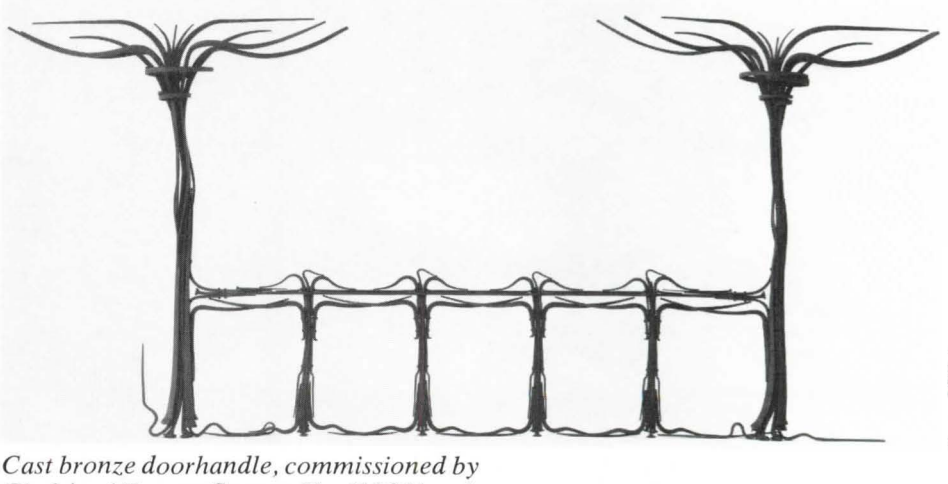

Bruce Miller

Cast bronze doorhandle, commissioned by Clyde's of Tysons Corner, Va. (1980) and now part of the Metropolitan Museum of Art's collection, is 28x32x2½ inches, left. Steel trellis columns and railing (1979) was also commissioned by Clyde's, top. Mild steel, brass and bronze bed, above.

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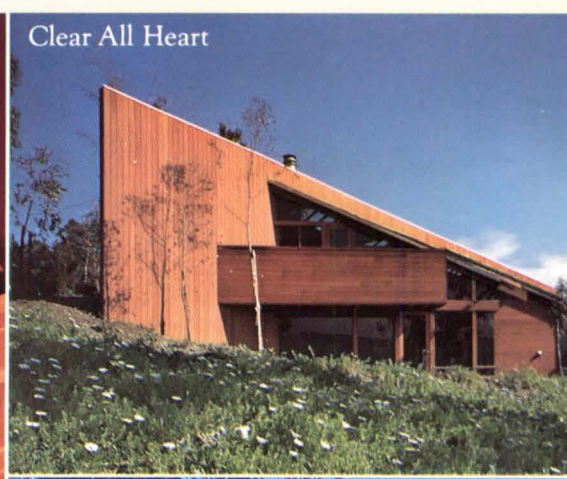
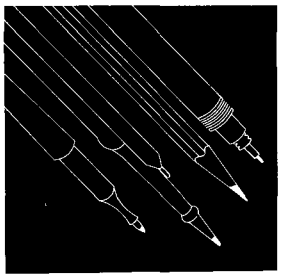




This is to announce the JOURNAL's first architectural drawings contest. As in last year's photo contest, prizes will be publication of the winners in the September issue. Deadline for receipt of entries is July 9. Eligible to enter are all registered architects and intern architects in the U.S. and Canada.

The drawings can be black and white or color, in any medium. But their purpose must be to communicate information about the design of a building or complex—be it real, projected or hypothetical. In other words, no travel sketches or landscapes.

Entries will be judged entirely on the basis of their quality as drawings, without regard to the quality of the designs they depict. Jurors will be the JOURNAL's editors and art director, plus Gerald Allen, AIA, architect and writer and coauthor with Richard Oliver of *Architectural Drawing: The Art and the Process.*

Entries must be slides, transparencies or prints no larger than 8x10 inches. Please do not send originals. Please put name, address and telephone number on each piece of material. And please include a brief description of the subject matter of each drawing.

For further information, contact Lynn Nesmith, assistant to the editor, at (202) 626-7477.

Personal footnotes: First a book plug. Few guidebooks could be truly said to be as useful to professionals as laymen. But this can be said of *The Architecture of the United States* by G. E. Kidder-Smith, FAIA, a three-volume work briefly reviewed in the April issue. The selection of buildings is sure-handed and the commentary on them literate and straightforward.

On another subject, Kevin Roche's donation of the Pritzker prize to endow a Saarinen chair at Yale (page 9) is one of the most warming and felicitous gestures of recent times. Less so was the comment of a juror that Roche's work "sometimes intersects fashion, sometimes lags fashion and more often makes fashion."

The comment ignores a major point of Roche's work, which is that fashion is beside the point. *D.C.*

Diary of an Arcosanti Experience

What it's like to be a Soleri 'workshopper.' Text and photographs by James Shipsky

"Sure there's mystique at Cosanti. But Arcosanti has a rarified high of its own. A mixture of hard construction worker, new age visionary, monk-builder, consciousness pioneer, evolution's own awareness of itself; spaced out on a sun-drenched image of a city made beautiful by living the future through living in the present, making the rest of America an obsolete launch pad preceding escape velocity." *An Arcosanti workshopper*

June 15, 1981: office of a Boston architect.

My work and most of my life style feel like a worn-out stereotype. I'm frustrated with the quality of the architecture I've worked with. It's too determined by the past and by standard building types; neither forward-looking nor shaped by the present. There's a wide gap between what architects value and what other people find rewarding in the built environment. Same story at other offices in town. What to do?

One word and image waits in the back of my mind, floating in a golden haze of utopian possibility: Arcosanti! The city of the future, being built from scratch out in the Arizona desert.

Mr. Shipsky is an architect, craftsman-builder and writer in Cohasset, Mass. He wrote about Bertram Goodhue's Honolulu Academy of Art in our March issue on Hawaii.

There is nothing else I can do. Asking my employer for a leave of absence to do an Arcosanti workshop, he replies, "You'll never be satisfied here; there's no sense in returning. I was very interested in Arcosanti when it first began; I wish I could go with you. Good luck."

Jobless now and beset with uncertainty, I send the $350 fee to enroll in the July 13 workshop. Begin reading books by Soleri and Teilhard, as suggested by workshop info packet.

Paolo Soleri: Born 1919, Torino, Italy. Dr. Arch. '46, Torino Politecnico. '47-'48 apprentice to Frank Lloyd Wright at Taliesin West in Arizona. Received Graham Foundation grant in '62 for "Mesa City" project. Guggenheim grant in '64 for research into architecture as human ecology. 1970: Corcoran Gallery stages show: "The vision of Paolo Soleri." Exhibit tours major cities. Author of four books. Numerous honorary degrees. AIA gold medal for craftsmanship. Subject of numerous articles and TV programs. Lectures in U.S. and abroad.

Soleri began construction of Arcosanti in 1970. Volunteers may participate in workshops, which consist primarily of learning and performing construction work, but also include seminars and field trips. Many colleges and universities grant academic credit to participants. For information, write The Cosanti Foundation, 6433 Double Tree Road, Scottsdale, Ariz. 85253.

The workshop begins in Scottsdale, Ariz., at Cosanti, a complex of structures which includes Soleri's home. Soleri bought this parcel of a subdivided ranch in '55 and moved into its pink tract house. From '56 to '70 he built experimental concrete structures on the property, with the help of apprentices and participants in the "silt pile workshops." Arcosanti, his new city in the desert, located 70 miles to the north. The similarity in names can be confusing.

Monday, July 13: Cosanti.

Have arrived at Cosanti. Registration and a walking tour of the complex. Tour concludes at the swimming pool, under a sky-blue canopy, stork-like on telephone pole columns clustered in threes. Looks like it was not built but grown. Guide asks us to be seated to meet Soleri.

But first comes Tony Brown, who discusses fundamentals of arcology in a nasal British accent. Says Arcosanti is not being built for financial gain, but rather is based on altruism. An attempt to build a prototype for a new kind of city far more beneficial to the growth of humankind than our present happenstance cities. The Arcosanti effort is based on frugality of resources, an ecological relationship with nature, personal asceticism.

Tony Brown: Joined project in 1971. Apparent background in architecture/urban design. Appears to be second in command after Soleri, and dedicated to the success of Arcosanti.

Finally Soleri emerges from his house, wearing short shorts, white undershirt and zories. Smiling, he welcomes us all to the workshop, and asks, "Who has the first question?" Our first seminar has begun.

Question: "How much of the arcology at Arcosanti is complete?"

View of Arcosanti from opposite mesa, summer 1981. From left, visitor center, ceramics apse, foundry apse, east and west vaults, housing theater of east crescent, Soleri residence, pool.

"Let me emphasize that neither the structures here at Cosanti nor the buildings under construction at Arcosanti are arcologies. We do not have the resources to work at the required scale."

Question: "Well then, what *is* being built at Arcosanti?"

"A base camp to house 500 to 600 people and enough activity to begin work on the actual arcology. It embodies some concepts of arcology. I call this stage the 'critical mass.' "

Question: "What is arcology?"

"Architecture responding efficiently to ecology. Or, a city contained within a single megastructure, aiming to maximize social benefits and minimize costs of land, energy and raw materials."

Forty-five minutes later Soleri excuses himself, promising to see us later at Arcosanti. Now it's time to drive up there.

There it is! From about a mile away, my first glimpse of Arcosanti. A chain of futuristic forms perched on the edge of a mesa. Closer now. Nearest building an elaborated five-story cube, buff with gray concrete stripes. Two concrete half-domes, one downhill from the other. A large battle-ax finial of concrete crowns the upper shell; the lower has trapezoidal pod earlobes. Both face out across the canyon. Next a large concrete vault, open at both ends, with buff concrete slant-topped appendages on either side. An in-progress structure with gray concrete columns jutting up. Finally an assemblage of rectilinear shapes and a railed platform. I'm anxious to examine these buildings more closely, but the lead car circles behind them and descends to the camp in the valley below.

Warnings against 'expectations or preconceptions.'

The camp is laid out like a farm village: dwellings in one area, encircled by outbuildings, gardens and fields. Tall leafy trees and a shallow lake.

From the preworkshop info packet: "Minimal sleeping shelters are available; however, if you have a tent, you are advised to bring it. Participants with vans or campers may use these as shelters."

We view the minimal sleeping shelters and decide where to stay. There's Plywood City—a single story, white, gable-roofed structure made entirely of plywood. It contains, in addition to several rooms, the camp kitchen and an outside dining area, the arbor. Cube City—concrete boxes with concrete roofs shaded by secondary roofs of corrugated steel. The yurt-like structures —a two story many-sided wood frame covered with white paper, with rooms closed off by colorful bedsheets. Tent City is tents scattered throughout the mesquite grove on the other side of the Aqua Fria River.

The rest of camp consists of the Octagon, a commons building made of concrete panels; a plastic covered greenhouse-cum-living quarters, and various cabins and vehicles dispersed between the river and the fields.

I choose a room in Plywood City and deposit my gear, then join the other workshoppers walking up the hill to the vaults, where we're meeting for lunch. Great quantities of food are served buffet style on two large worktables.

Our initial overview of Arcosanti is the same tour that visitors receive. Naming the buildings and briefly describing what goes on in each, our guide also mentions rules of life at Arcosanti: mail, phone, how to use the toilets.

In the evening dinner is served under the willow tree in front of the ceramics apse. Residents and workshoppers begin getting acquainted. There seem to be 30 to 40 people living here, ranging in age from several toddlers to some past retirement age. I turn in early, for "first bell" sounds at 4:45 A.M. tomorrow.

Tuesday, July 14: Arcosanti.

Wake up to Soleri bell, dress & wash, plod up hill. After breakfast at 5:30, the construction manager opens the morning meeting: "There'll be a major pour today in the east crescent. . . . Are there any announcements?" A variety of personal and community announcements are made. "A list has been posted assigning workshoppers to work crews. Will each crew leader please stand and identify him or her self now." They do. "O.K.! Let's go to work!"

I'm on Peter's crew. We follow him back down the hill, to a long strip of bare soil. "You're standing in Arcosanti's future orchard. The rain we've been having lately has destroyed the original irrigation ditches. We're going to re-dig them."

I dig but I don't like it. I've left my job and come 2,700 miles to work on Soleri's city. Why am I roasting in the sun for peach and pear saplings? Frustrated, I feel like a resource being unecologically wasted. Are they overlooking my architecture degree and experience? Is it an initiation into the humility, discipline and monasticism Soleri spoke of? Is it to accustom me to strenuous work in the Arizona climate?

After two hours of digging we stop and visit the lab building, which contains the wood shop and tool shop. Each workshopper receives a tape measure, pliers, hammer and hardhat in return for a $20 deposit. A lecture on site safety. Walk over to the crane and learn signals for directing the operator. How to break bags of cement at the concrete batch plant. A tour of the drafting room attached to the unoccupied Soleri residence.

The afternoon brings a tour of the camp, starting in the kitchen. Residents and workshoppers share kitchen chores. These include recycling aluminum, steel and glass containers, and organic garbage. Ecology starts with basics.

Wednesday, July 15:

This morning my crew is assigned to weeding the watermelon field. Russell says the melons are a cash crop to help finance construction. Now Arcosanti's income comes from the sale of the well-known Soleri bells, supplemented by visitor's fees, Soleri's books and lectures and rare small grants. Uprooting ragweed and deadly nightshade, I begin to see why construction progress is so slow.

At 9 A.M. we gather in the visitor center for Tony's model talk. A large plastic model depicts the 5,000-person arcology proposed for Arcosanti. It is the goal of all the efforts expended since 1970, although its construction has not yet begun. Tony describes the structure and hypothetical life within: single mega-

Right, the 10-year-old Cube City area with its roof shading canopies. Opposite, the roof of the ceramics apse and a theatrical mask.

structure, 25 stories, solar heating and cooling, greenhouses on the canyon walls below, no cars within, in-fill housing built by the residents, floor subcultures, in-home work, education and medicine. Question and answer period.

At lunch I sit next to Eric and ask about his background.

"I'm from Holland, an urban design student," he replies.

"How did you find out about Arcosanti?"

"Many students from my school have been here. The urban design instructors encourage us to come."

"What did you think of Tony's talk?"

"I don't think I'd like to live in a 5,000-person arcology like the model. It would be claustrophobic, especially since the entire shell of the city would have been designed by only one person. But it's a hard question, because I like many of the ideas: no cars, being able to walk to any friend or event in 10 minutes or less, being efficient with land and energy."

"What are you going to do after the workshop?"

"I don't know. My school seems to be missing the point of the important changes needed in urban design. I want to find something more relevant to the problems I see all around me, but at the moment I'm unsure of what to do next."

More tours fill the afternoon. We walk through the foundry and a passive solar heating system. I'm tired of tours, talks and toil in the fields. I'm disappointed in the whole thing. After dinner I ask if I can obtain a partial refund and leave the workshop. No refunds. What to do? I vent my frustration on Gary, a fellow workshopper.

Gary is supportive and offers good advice: "An architect I know has done workshops and is coming back this year. He warned me against having any expectations or preconceptions, to maintain a sense of humor and to just take the workshop as it comes."

I realize I'm disappointed because Arcosanti fails to live up to my utopian fantasy. Yet an uncertain sixth sense warns me, "If history is being made here, you're going to miss out on it." I'd better stay long enough to make accurate observations, unbiased by misty preconceptions. Can't get back my money or time anyway; might as well make the best of it.

In the evening there's a lecture by Don Felts, a solar consultant who works with Steve Baer in New Mexico. Don is donating a week of consulting services to Arcosanti. His lecture gives clear guidelines for incorporating a solar design component into the schematic design phase of a project. Don gives examples of surprising conclusions resulting from cost factoring various heat gains and losses of a proposed building design.

Thursday, July 16:

This morning we are assigned to new crews and finally get to start construction work. I'm on Mike's crew; we will build the stage of the new theater. Other crews will be constructing a housing unit in the east crescent, making precast concrete structural members, applying waterproofing and insulation to the theater roof. Some workshoppers choose specific projects: learning to weld and braze, designing and building a nature walk, working in the fields and gardens.

Mike gives us an overview of the work we'll be doing, and we begin a three hour work session. We learn to use a Hilti hammer drill and to install concrete anchors.

A midmorning tour underscores the broad range of Arcosanti activities. We've walked and talked through all the remaining departments: plumbing shop, electrical shop, metal shop, visitor center, cafe and ceramics apse. I've got information overload, and skip the last tour.

Friday, July 17:

Today is our first full day of work; the orientation tours are over. The workday schedule feels comfortable: five and a half hours of work done by lunch hour, which includes time for conversation, reading, a swim or nap. After two more hours of work, we stop at 2:30, when the temperature has peaked, and head for the pool.

Second Week: Monday, July 20:

This morning Marti and I are steelworkers. We carry 20-foot lengths of number five re-bar to the vaults, cut them to length and lug them down to the theater. When the old re-bar cutter breaks, we learn how to operate the power hacksaw in the metal shop and continue our work there. We arrange the re-bar into numbered bundles to await placement.

Soleri is here this morning to review the construction completed since his previous visit, and to answer questions in the workshop's weekly seminar. His responses link urban design with philosophy, theology, science and art. He mentions the eschatological hypothesis, grace and residual anguish, and invents new words to express new connections: ecotheology, esthetogenesis. Soleri disturbs our notions of God and humanity. Is evolution directed by complexity, liveliness and miniaturization? Does evolution tend toward awareness and spirit? Soleri makes clear that his philosophy prescribes a goal, and Arcosanti is proof of his working toward it. What is my philosophy? Do my personal and professional goals fulfill that philosophy?

After lunch a tractor-trailer load of dubious lumber arrives. Fifty workshoppers and residents form human conveyor lines to rapidly unload it. It's hard, hot, dirty work, yet the group spirit is fantastic. I don't understand why. To further the cause of Arcosanti? Don't think so. Or does each person feel responsible to the others?

After work I ask Marti, "What about you, are you an architect?"

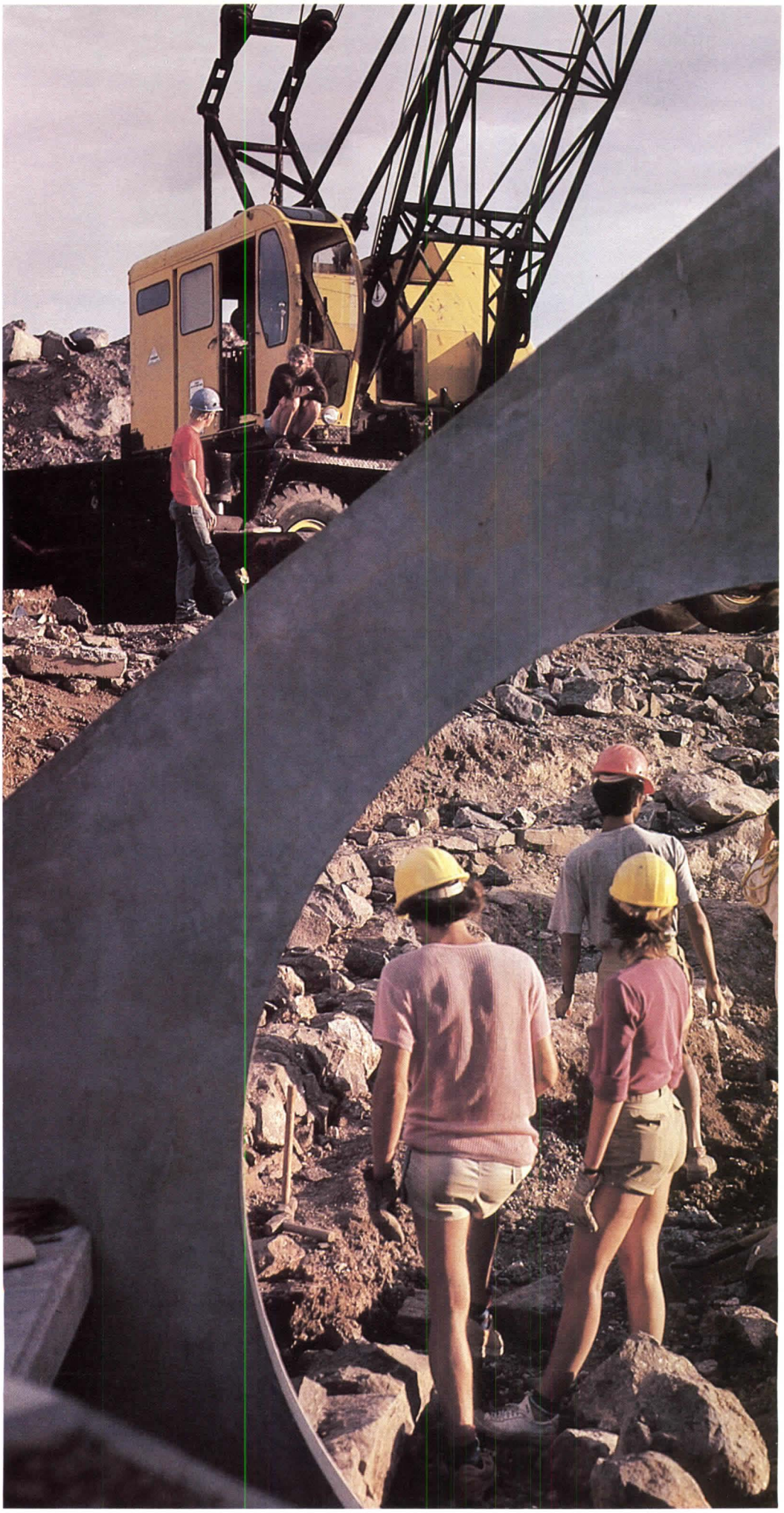
"Absolutely not, I majored in literature at the University of Oregon. Since I graduated in '80 I've been working as a business consultant."

"Why did you join the workshop?"

"I did a workshop in '72 when I was still in high school. I especially enjoyed the physical part of it, and being in the Southwest. And my father has been here for the past year."

"Your father?"

"He's in charge of the manufacturing department, trying to broaden the base of Arcosanti's income. My brother is involved



too. He runs the Zona Gallery in New York, which handles Soleri's bells and other art work."

"What are your thoughts about Arcosanti and the workshop?"

"I love the feeling of sitting in front of the ceramics apse, but I'm put off by the sloppy appearance of most of the site. . . . There are organizational problems; Paolo is an artist, not an executive manager. . . . The scope and passive threat of Paolo's ideas arouse the iconoclasm of many workshoppers, and their negativity spreads. It would help if the orientation process fostered a nonjudgmental attitude. Too many minds close during the first few days. . . . I like the fact that women are treated equally here. There are woman crew leaders and department heads."

Tuesday, July 21:

Bodies get tough from the work, walking up the hill, swimming, hiking. Mind gets sharper from grappling with Soleri's answers; from talking with other workshoppers.

Today while the bulldozer is grading the amphitheater, we're casting a slab to complete the floor of the vaults. We carry bags of cement and break them into the batcher. The crane lowers buckets of concrete through the gap between the north and south vaults. We dump concrete into wheelbarrows and push it over to the pour. The vibrator spatters concrete onto our faces and clothes. Screed, jitterbug, magnesium trowel, wait. Steel trowel and edge trowel. Spray with crete-cure. Clean up.

Wednesday, July 22:

Digging trench for pipes to pass under stage. Hit bedrock. Cast pavers while waiting for rental jackhammer to arrive. Mike works long past quitting time, using the jackhammer to cut a trench through the rock. Why is he willing to work so hard for so long?

During lunch hour Leila had rushed sobbing out of the vaults. In the evening I ask her what happened.

"Oh, it was just a remark one of the residents made to me. You've got to be tough to get along with some of the people here."

I ask about her background.

"In high school I was interested in the diplomatic corps, but I majored in art education. I worked in a volunteer tutoring program, then enrolled in American International College."

"How did you hear about Arcosanti?"

"There was a presentation at RISD by someone who'd been here over a year, and I read William Thompson's *Passages About Earth,* which recommends doing something useful instead of overschooling yourself. Arcosanti has been in the back of my mind ever since."

"How are you doing here?"

"At first I was working construction, living in the yurt, and hating both. But now I'm working with the agriculture people and living in my camper, and it's much better."

"What bothers you about Arcosanti?"

"I enjoy being with the workshoppers, but the residents are an unknown to me. They seem to consider themselves upper class citizens. Most of them live up on the hill, segregated from the camp. . . . Some workshoppers are unenthusiastic and directionless. Their crew leaders say, 'Get to work or else—the door swings out; my way or the highway.' It would really help if there was a counselor to turn to. . . . The fee meant a lot to me, and I don't think I'm getting much in return. I don't like conditions in camp, sometimes the dishes are dirty, and the medical care is inadequate. Most of the workshop caught the stomach virus that was going around."

"Would you consider staying here?"

"Only if I had a skill that is valuable here, like engineering, surveying, gardening or cooking."

I happen upon Russell in the kitchen that evening, and start to get a clearer picture of what's going on. "Russell, how does one become a resident?"

"First you do a workshop, paying the full fee. Then you do another five weeks, paying only food and insurance. Then if a job is available you're qualified for, you start getting paid. Minimum wage is the most anyone makes, even Paolo. Some jobs start at a dollar an hour. If no jobs are available, you work as a volunteer until one opens up. After you've been here 20 weeks you can attend and vote at resident meetings."

"What happens at resident meetings?"

"Usually we discuss community problems. Like once this guy got dusted by a car. He jumped on the hood and kicked in the windshield. Another time two of the four people sharing a suite in 'crafts three' wanted to divide the space with a partition, but the other two objected."

"How were those disputes settled?"

"A lot of residents wanted Paolo to step in, but he said it was our problem. We elected a court and had a trial."

"How long have you been here?"

"I did a workshop in '75 and stayed two and a half years. Then I left to live with my girl friend."

"What brought you back?"

"I wasn't doing anything that felt worthwhile. I could have gone back to school, but Arcosanti is a richer experience. This is a holy war against entropy, the only one I can find. Besides, I left too soon, before it was all out of my system. When you leave, you have to really leave."

Third Week: Monday, July 27:

Digging holes for stage footings, struggling with rocks. I feel the construction setting the order and timing of our work. A film crew from Phoenix's Channel 3 "Evening Magazine" is filming and interviewing our crew.

Tony, a fellow crew member, shares some insights with me while we work. "An architect I know visited Arcosanti, and ridiculed the crude detailing. Those first impressions were the basis for his declaring the whole project unworthy of serious consideration. I'm put off by those things too; I love finely made things. Some of the buildings here look like cardboard study models which were built before the final design stages were reached. I think a beautiful concept of urban life should be reflected in a well-made container."

Tony continued, "But now I see things from a different perspective. Soleri admits he's never been a practicing architect, and wouldn't be good at the myriad details of practice. No one involved in the design process here has much experience in professional practice, and they don't share the values of most practicing architects. Secondly, these buildings were built by workshoppers, people with little or no construction experience, people who come here, receive minimal training, accomplish some construction, then leave at the end of five weeks. Now I'm amazed that so much has been accomplished, and I understand why the detailing is crude.

"I've gained a lot of respect for the crew leaders. They come here like us to do construction. Most are in their early 20s, and responsible for a major construction project. They have to teach workshoppers the most basic skills: how to put a drill into a Hilti, how to apply crete-cure, everything. They have to check each workshopper's work, and counsel those with problems. Just when the crew is getting good, the five weeks are over and the crew leaders have to start from scratch with a fresh workshop."

Wednesday, July 29:

Some interesting questions at today's seminar with Soleri.

Question: "Do you feel the staff here would be more productive, and the buildings better, if they had opportunities to contribute to the design?"

"If they want to design their own arcology, let them buy their own mesa and build on it. But not here."

Question: "Wright called his architecture organic, and you apply that term to Arcosanti. Yet Arcosanti doesn't seem to have a harmonious connection to the landscape. It seems more like a Corbusier villa on pilotis, aloof from its surroundings."

Conflicts between 'people with power' and residents.

"I use the term organic in a different sense. My buildings are organic to the extent that they serve their function. An arcology is organic if it serves the urban effect."

Question: "Do you see the present Arcosanti community as a participatory democracy, with the residents having influence in matters that affect them?"

"No."

I'm disturbed by Soleri's statements, but Aki, a student from Japan, tells me, "My friend studying in a Buddhist temple in Tokyo *told* me that when in the presence of a great person, one should not ask anxious questions. One should maintain an evenness of heart and simply listen. One profits from contact with a great person whether one agrees or disagrees."

Friday, July 31:

Installing steel for stage kneewall. Hammer re-bar into holes drilled in bedrock. Satisfying symbolism of building a foundation on bedrock. Use transit to determine top of wall.

When tour guides bring groups of visitors past the work area now, I feel like an insider.

At the seminar, Bobby asked many questions about Soleri's philosophy, and I interview him. "Bobby, what's your field and background?"

"Bachelor of architecture, University of Cincinnati, '80, master of architecture, University of California at Berkeley, '81."

"Did you study under Christopher Alexander?"

"Yes, I had lectures and studio courses with him."

"What led you to Arcosanti?"

"Five years ago my father, who is an artist and art historian, showed me pictures of Cosanti and Arcosanti. Ever since I've wanted to find out for myself what it's really like here."

"What's it really like?"

"It's a complicated situation. First, I think the new look of Soleri's architecture confuses people. But if you examine it and experience it you find it life-draining, not life-giving. Creative people don't stay here. The architecture cannot help but express Soleri's personal philosophy, and I think that's where the real problem lies. When Soleri says that God is not, he makes a crucial break with Teilhard, whose ideas of evolution and love are worth living for.

"But Soleri understands life only on a biological level and reduces it to a bare minimum. His will to power disturbs me. His attitude toward man and nature follows the line of Kant, Nietzsche, Marx. He intends to use ecology to dominate nature for man's ends. He emphasizes the group to the detriment of the individual."

"What would you find an acceptable philosophical basis for building a new city?"

"I think the universe is changing, but there is a central core, an ontic essence, which architects should try to reflect. Some architecture succeeds in this, and manifests a vital connection to the whole universe. It becomes an environment of knowledge. It connects to the condition of man, it enhances the natural order and brings meaning to our lives. It keeps sacred the relationship between man and nature. Architecture like this asks the question, 'What is it to bring something to deeply presence itself in the world?' "

Saturday, Aug. 1:

Leaving Arcosanti for the first time, driving to Mayer to buy shoelaces and a notebook. The smear of houses, mobile homes, gas stations and work places disgraces the Arizona desert everywhere I look. Their message is clear: "Every man for himself." Chaos, disorder.

It feels good to drive back into Arcosanti, in spite of the present clutter surrounding the buildings, for it is an attempt to live on the land in an ordered, cooperative, intelligent way.

Fourth Week: Monday, Aug. 3:

Building forms for the stage kneewall, using plywood scavenged from the used wood piles. Cut it with worm-drive saw; brace it with big rocks. Mike calls it rock technology.

In the evening there is a seminar about a group called "urban ecology." A group of people from Berkeley who had done workshops got together, calling themselves "arcology circle." Their goal was to build a 10,000-person arcology in Berkeley. Now they are applying arcological ideas to the existing neighborhood: writing an ordinance proposal for a setback variance to make it easier to add solar greenhouses to existing houses; hosting a national conference—"energy and the city."

Tuesday, Aug. 4:

Poured kneewall in morning. Stripped inside forms in afternoon and shoveled backfill into place. Began building curved forms for front edge of stage slab.

A fellow named Chip has joined our crew, and I ask him my usual questions.

Chip: "I'm 33; bachelor of architecture, University of Wisconsin, '71. Did a workshop in '73 and stayed four months, when I ran out of money. I returned for another stint in '74. I have a job now in the Napa Valley, doing planning, design and construction for a new winery. But now I'm on a two week vacation."

"You mean you've come here to work during your vacation?"

"Yes, I find the Spartan life here good for the mind and body. It's refreshing to find that the most basic accommodations are adequate for the good life. Maybe they help create it."

"I feel a little guilty about not having the attitude of a Soleri disciple. I've come for the workshop experience, not to get Arcosanti built. It's stimulating to talk with the workshoppers, to return my thinking to the important things, to quesion my previous experience. I enjoy working and socializing with the same people."

"What problems do you see here?"

"Human resources are undervalued. A person who commits everything to the project may be tossed out, for there's an endless supply of idealistic young people. . . . The camp is filthy, the garden doesn't work, there's trash in the river."

"Will you be coming back during your vacation next year?"

"Yes."

I need a resident's viewpoint on some of these issues. I'm closest to Mike, my crew leader. I ask first what he'd done prior to Arcosanti.

"I'd been a student since kindergarten, and I wanted to do something else. I saw Soleri on Dick Cavett's show, and came to a workshop when I graduated from the University of Connecticut in '79 with a B.S. in biology."

"Then you've been here for two years?"

"Yes, I really enjoy the workday and my job. Arcosanti attracts exceptional people; I have good friends and relationships here. American culture devalues physical labor, but I've found it rewarding and satisfying; it makes me feel good."

"What do you see as the major problems?"

"Conflicts are arising between the people with power and the resident community. The board of trustees supposedly runs Arcosanti, but Paolo retains control over all decision-making. The board is neither in touch with the community, nor open to community input. Paolo placed some of the people on the board to reward them for being here so long. But they're not urban people; they don't ache for Arcosanti to succeed; they're satisfied with things as they are.

"As for the community, Paolo refuses to acknowledge its existence. He never intended to found a cohesive, independent community. He needs us to build Arcosanti, but he denies us a role in shaping its consciousness. He says that more 'body' people and fewer 'mind' people are needed. He feels the community is the result of the 'village effect,' not the result of his city, therefore it's not valid. Paolo feels we are only a collection of indi-

Above right, the foundry apse at Arcosanti, a vaguely anthropomorphic form, with dwelling units at each side like giant ear lobes.

viduals with unique stands on each issue, and that it is a waste of time for him to attempt to reach an agreement with us. Furthermore, he feels we don't understand him and can't communicate with him in the terms of his philosophy.

"But there is a valuable community here. When you first come here you see yourself to some degree as an apprentice to a master. Later you realize you've sacrificed your liberty, and want to be treated as an equal. But the community tends to be apathetic and reluctant to act in its own interest. We accept rules made by Soleri and the board which are of questionable worth to us. But the community's self-awareness is growing. We are studying Paolo's essays and discussing them in groups, until we share a clear understanding of them and can communicate decisively with Paolo. I think the future of Arcosanti depends on this community."

"What changes would you like to see?"

"If Paolo insists on complete control, he needs to be more in touch with what's going on here. He should live at Arcosanti, but I think family ties will prevent his ever leaving Cosanti. And it would help to have community members on the board."

"What are your feelings about workshoppers?"

"It's disappointing to make friends with workshoppers and then have them leave at the end of five weeks. Residents need some separation from workshoppers, to maintain a more stable life of our own. Some workshoppers see this as elitism or a class system, but for us it's a question of survival.

"Each workshop has its own personality. There are complain-a-lot workshops, disco and party workshops. The last workshop coincided with a financial crisis and there was a lot of tension. The summer workshops contain more students, who know they'll be returning to school. The spring and fall workshops have more mature people, and many consider staying. More work gets done then."

"What are your plans for the future?"

"Law school. I'm especially interested in the environmental law aspects of urban development. I hope to return to Arcosanti to set up my practice."

Thursday, Aug. 6:

A visitor from an organization in Cambridge, Mass., gives a talk after work:

"Hexiad is an intentional community whose work is to enhance communication between intentional communities. Two years ago we gave video equipment to Arcosanti, Findhorn, in Scotland, and Auroville, in India. We asked them to communicate with video letters, hoping they would mutually benefit. Currently we are compiling a computerized census of communities."

Ruth, a workshopper who had visited Findhorn, had some insights into Arcosanti as a result.

"At Arcosanti the emphasis is on buildings, but at Findhorn it's on personal growth. One of the main things lacking here is some way for the whole community to share its love and support. Until Arcosanti finds it, life here will be only half fulfilled.

A glimpse of the future...or another planet.

To the extent that Arcosanti can communicate love and acceptance, to that exact extent can it add new members."

Saturday, Aug. 8:

Today a field trip to compare Arcosanti with other urban approaches, and to trace the architectural experience of Soleri in the Arizona desert. We visit Taliesin West, Ahwatukee—House of the Future—by Taliesin Associates, the Hyatt Regency Hotel, Wright's Arizona Biltmore and the Phoenix Art Museum.

On the return trip I talk with Jack, who teaches environmental design at a private school. He comments, "One thing I've gotten out of all this is that the total environment shapes our consciousness; we cannot avoid shaping the total environment; therefore we'd better do it well."

Week Five: Wednesday, Aug. 12:

Placed and braced last forms for stage edge. The rest of the crew spread the aggregate base and installed the steel reinforcing. Everything's ready for the pour tomorrow.

I think I understand why the residents are willing to work so hard for so little apparent reward. There is a great thing to be done here, and the Arcosanti community has accepted the challenge. They feel that Arcosanti, with all its faults, is a more worthwhile endeavor than any other on this planet. Soleri has made clear what this city is for. The goal is known, and the residents believe in it. When these conditions are met, people are capable of amazing energy and dedication. Work is their religion, and pouring concrete is the highest ritual. Each yard of concrete poured is a step closer to the final goal; each day is a meaningful day.

Tomorrow, the next-to-last day of the workshop, we will pour the stage slab.

Thursday, Aug. 13:

Begin by breaking bags of cement into the batcher. We use all the bags in the storage shed and need more. It was ordered and should have been delivered yesterday. Mike says, "Typical snafu." The transit mixer hauls the concrete over to the crane, which hoists one-yard bucketfuls down to the stage area.

Aki has the honor of dumping the first bucket, then we take turns dumping and guiding the bucket, giving crane signals, operating the vibrator, sliding the heavy steel truss screed back and forth. We run out of concrete with a third of the slab unpoured. Still no cement delivery.

Finally the truck arrives. We rush up to break bags and begin the second pour, thoroughly vibrating the joint. Gary's tape deck is blaring out Jimmy Clift, "You can get it if you really want, but you must try, try and try. . . ."

All concrete in place. Fix area dug up by end of screed. Work slab with bull float; first magnesium, then Fresno. Wait until concrete sets up enough to use power trowel. Take off shoes to waltz power trowel back and forth over slab. The construction manager brings several bottles of champagne, which we pass around while working. We go up on the roof of the theater to wait for the concrete to harden enough for an abrasive finish. A bottle of Annie Green Springs passes around, disappearing when a group of visitors stops to view the theater. Slab finished at 5:30; a 12-hour workday. Feel great!

Friday, Aug. 14:

Last time I'll walk up the presunrise hill. Not much work to do today, mostly cleanup.

Night. Only moonlight illuminates the mesa. Sitting on rim of mesa on the other side of the canyon. Various parts of Arcosanti glow with light and color. Suddenly I have the perception *that it's all one* structure, from the visitor center to the pool, like a big animal lying there. From its tail big speakers are blasting out pure rock music at the last party. Feel like I'm glimpsing the future, or a colony on another planet. There's a pause in the music, then John Lennon singing, "Imagine all the people, living for today. . . ." □

The north and south vaults where breakfast and lunch buffet occur, also containing the weld shop and electrical shop.

Photographs by Steve Rosenthal

Evaluation: Relic Of Sixties Strategies

Boston's Josiah Quincy Community School, with the accent on community. By Jane Holtz Kay

It was 1968: The Oak Street storefront might have come from Central Casting. "No furniture, no heat, Morgan Memorial furniture," Morse Payne of The Architects Collaborative recalls. The empty quarters in Boston's Chinatown looked like a clone of the empty rooms that would become the stage set of the decade's major urban design drama: *The People v. the Urban Renewal Rough Riders.*

Here in the half-mile pocket of South Cove, the usually docile Chinese community was trying to take possession of the neigh-

Ms. Kay, author of *Lost Boston,* is architecture critic for the *Christian Science Monitor.*

borhood, learning to say "Hey, this is our school and we ought to have some input," as Stephanie Fan, coordinator of the Quincy School Community Council, would put it. "Brought by print, bullhorn and word-of-mouth," in the language of the Quincy School Complex report, the 15 lawyers, teachers, unemployed—"everything"—on the council would claim a share in the destiny mandated by such institutions as the Tufts-New England Medical Center, the Boston Redevelpoment Authority and the Boston school department. "The scale of urban life must be more localized," their document declared.

"We were meeting three or four times a week," Fan recalls. They were tooling not just a school but a $9 million center of Chinese life with education, health facilities, meeting rooms, "Little City Hall" in 62,000 square feet of space. "It seemed at the time the meetings went on forever, year after year," Stuart Loesser, then head of Boston's public facilities department, remembers.

"The kind of thing that leads to burnout," says Fan.

"That was a high energy time," says Loesser.

In "Another Country," James Baldwin might have said.

It is 1982: The Dumpster packed with a Watts Tower-worth of trash stands behind today's six-year-old Josiah Quincy Community School, the rust emerging from beneath the blue paint. To the man groping through its contents, it holds treasure enough:

The photos on these pages all were taken when the school complex was newly built. The changes since have been mainly in use and population, however, rather than in the physical facilities. The housing tower is in the background of the photo at left. The other photos show the terraces and playgrounds that roof the complex, creating precious space.

Photographs by Steve Rosenthal

'Symbolizing' of architectural expansionism.

He is as ragged as the Dumpster, pawing through the refuse of the school, picking and rejecting, groping and sorting. His condition is a sad contrast to the trim, buff concrete building banded by orange and encircled by a vivid frieze of kids' drawings.

Perhaps that contrast is too clean, too ironic: The 1960s dream vs. 1980s reality. In these times, with these cutbacks, the Quincy School, child of the federal "sugar daddy," can seem too clearly a case study in where-have-all-the-flowers-gone. The product of two decades of decision making in design, the K-5 elementary school by the artery was the epitomy of evolutionary architecture not mired in its processes, a demonstration of a building designed by a committee that did not look like the proverbial camel. Where has it gone?

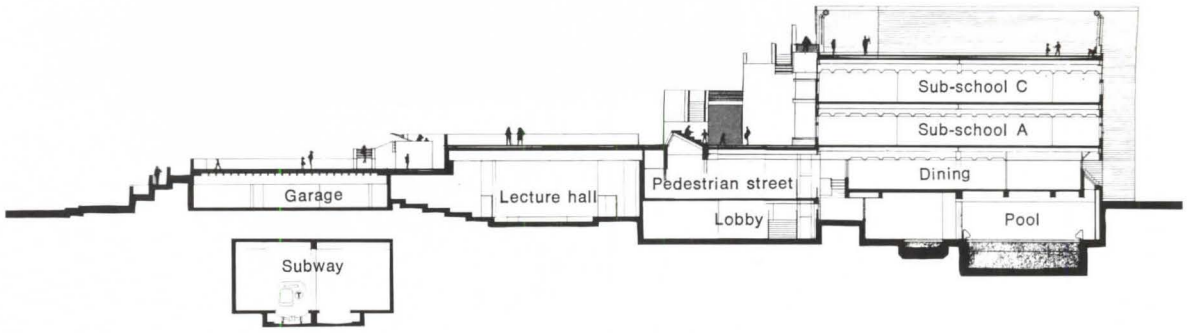
The 820-pupil school, named for Boston's most civic-conscious mayor, remains a symbol of the architectural expansionism of the past, an urban activism that aimed not just to create a school but a "resources center." "It is," as its earliest planner and father figure, Hermann H. Field of the Tufts-New England Medical Center, observes rather wistfully, "an example of a much more hopeful period than we have now."

The Quincy School's most vociferous and enduring planner, Field had, in fact, limned the destiny for the Chinese community bisected by the Tufts-New England Medical Center, had plotted some of its parts, and had chosen The Architects Collaborative (TAC) long before the community entered the fray in 1968. Tufts first took a look at planning for the South Cove in 1961 and began "conceptualizing" at mid-decade.

Today, the plans and documents bundled together by Field as history and testimony almost bear the guise of period pieces; they are reminders of the heyday of a certain kind of urban design in Boston, dominated by Edward Logue who had descended from New Haven to reign over the Boston Redevelopment Authority's (BRA) creation of a "New Boston" in Design Research-y quarters on the top floor of the old Victorian City Hall. His old BRA still lingers as a nostalgic era for middle-aged architects even though they may have learned to loathe the bulldozer elements associated with the period. That sense of urban possibilities and design enthusiasm still lingered when the working drawings for Quincy materialized a decade ago.

The times worked with the plans for the school. If the Chinese community wanted access, then the TAC architects and other planners would open a central spine from corner to corner there: The Josiah Quincy became a Main Street as much as a school. The diagonal axis created an interior artery. Stemming off either side of this path, the health center, the Little City Hall and the school offices stood like service "shops" to either side. Doors opened at either end allowing the community to flow through this vivid new street.

Clearly, the public had priority; cities, at their nadir, began to look promising again. Optimism was in the air. If the Quincy School had the smallest site in the city (2.3 acres), no matter. The architects would find room to boot kickballs, to shoot basketballs and the breeze. To allow outdoor space for both the school and the community, they stretched four levels to the roof. A stepped pattern of terraces and playgrounds—some at ground level, some off the classrooms—would provide a place off the



Success as 'a pedestrian place and crossroads.'

streets with an animated mix of platforms, bridges and street furniture on this most urban enterprise. If funds had not yet come for housing, they would: Simply cut out a wedge (15 percent of that 2.3 acres) and wait and, sure enough, the tower did appear (elderly housing designed by Jung Brannen). Finally, the trolley: 20 percent of the site. Public transit was essential, and when the orange line extension slid out on its rails, it would pick up passengers at the Quincy School subway stop. That stop is due to open in 1986.

Inspired by the link-arms esthetic of the hour, signs spoke three languages. Printmaker Maria Termini blew up graphics by the Chinese children. Their red and yellow cutout silhouettes overlapped on porcelain panels to blazon the exterior. Inside, a sprightly use of color (banners angling above the pedestrian spine, carpets in many shades dividing the teaching rooms, colored furniture, yellow/orange trim) and shape (half-moon windows in the doors, triangular windows at the shoulder height of the kindergarten class) enlivened the red brick and the buff-colored split-faced concrete block used throughout.

Academically, the times favored innovation in the 1960s. Everywhere the openness had its reflection in the readiness to retool old teaching practices. The classrooms literally opened up. "Libraries" passed out of semantic favor as such; "media centers" entered. Funded, of course, by charities (the Ford Foundation's Educational Facilities Laboratory and the Carnegie Foundation made Quincy possible) and the federal government (the first Title III was approved by the Boston school department here). "That money was really my leverage," Field says. "Whenever the school department got edgy, I would tell them we'd better be on track."

Quincy belonged to a generation of 20 new schools built by the city's public facilities department. Moving at an excruciatingly slow pace through the endless community planning process cost it time; it also gave it time. The community council could pick which of the new educational notions to practice—here a gymnasium allowing community access, there a health facility. They had been tried elsewhere, and Quincy could learn from them.

Technologically, it fit into a tryout time too. This was the high time for prefabrication, and the public facilities department developed the Bostco (Boston Standard Components) structural system, supposing that this search for standard components would lower costs and expedite building. The public facilities department ordered construction of a steel superstructure with integrated ceilings based on a flexible five-foot grid; this constrained rather than aided their design, however, the architects now feel.

In other ways, the times also worked against as well as with the school. It was the era of vandalism. Windows were suspect. Rock throwers were prevalent, and plate glass their target. The

The interior street (above) is still well trod but not so alive with community use. Classrooms (above right) are no longer so open.

Photographs by Steve Rosenthal

Architects Collaborative had to struggle for glass, not plastic, windows. Architect David Sheffield recalls setting up a test sheet of glass on a vacant lot in an urban Somerville neighborhood. When the sheet withstood the neighborhood toughs, the public facilities department O.K.'d its use: The windows came. Nonetheless, traces of this mix of trust and distrust remain. The windows did appear, but today teachers conducting classes complain about their sparsity. There weren't enough, and they feel cut off from the community. "We don't know what's going on outside," says one.

Such conflicts in times past as well as times present account for the lapse between the ideal and the real at Quincy; the unresolved 1960s vision of a community resource combined with the 1980s cutbacks on that vision show. There was and is disharmony between educational innovation and bureaucratic sluggishness, for instance—the open classroom goes against the teachers' ingrained notions of privacy.

Then there is the discord between the designer/activist's urge for an intimate neighborhood scale and the urban renewal megascale of the program. South Cove is a small, slightly seedy collection of homes, institutions, shops. Could a loomingly large building be a good neighbor to that choppy, shopworn environment even when its architects injected "human" elements? Can detailing with color or incorporating human services recreate the urban vitality that 19th-century cities like Boston grew into by slow accretions? Where in America have such new projects matched up to the older, episodic, people-sized city? Could a Quincy have worked? Will it continue to work even partially in these times? Specifically, how has Quincy's do-good design fared in the fallow years that followed its birth?

It is easiest to grade Quincy's physical aspects. In the face of a changing era and a changing community, the Quincy School appears to have held up physically: ongoing maintenance and the durability of its surfaces show that it has earned care and respect not always present in public buildings. Nor has it engendered the awe that suggests intimidation. The casual irreverence implied by walls plastered with bright art—from "Erin Go Brach" St. Patrick's Day decorations to notes in Chinese calligraphy—underscore how well the architects debrutalized its hard surfaces.

As a pedestrian place and crossroads, the school still generates life. Despite locked doors and a remove from street life, mothers push baby carriages through its axis, and Chinese residents visit both the health center and the English as a Second Language Center. Yet, as said, at least one teacher pines for the lost poetry of views of the sea, the street, the trees. For Quincy is, in the end, a closed place, far more closed than its creators dreamed, not only in the locked doors and infrequent sense of the neighborhood outside but in the classes where the semipartitioned "flexible" space no longer flexes. Teachers contemplate The Architects Collaborative's obviously movable partitions, shake their heads and insist they are rigid. Here, as elsewhere, the divisions and makeshift or solidified partitions indicate and accentuate the flight from shared teaching to isolated approaches.

Some of the school's trials and failures in openness stem from the city's well-publicized ills. Cuts due to Proposition 2½, Bos-

'In spite of all the odds, it's there.'

ton's version of Proposition 13, have drained the city's police and fire departments and, of course, school department faculty and staff. Quincy's luxurious pool was a placid glass lake, unsplashed by a single swimmer, the midmorning and late afternoons of my visits. It lacks staff in winter and, sadder still, is often unused in summer. The roof decks need fencing. If grants fail, so does use of the play or auditorium areas, too. "Some years the pool's staffed and some years it's closed," Loesser says.

The Quincy Community School project was pummeled into shape during the period of inner city revitalization and communalization. Its originators fancied a Little City Hall to serve the surrounding village. "Making Place," a *Progressive Architecture* article, summed up the feeling five years ago. The corridors and classrooms still bear the signs of Quincy's link to the Chinese community, and the neighborhood has, in fact, lost its multiethnic mix of the '60s, which included Syrians, Armenians and Puerto Ricans, in favor of a growing Chinese influx. Nonetheless, the school is bureaucratically chopped off from its environs. Boston busing has meant that only one-third of the Quincy constituency is Chinese; the rest head out of the area, and parents of school age children no longer focus there. While the school body has in some senses shrunk, the notion of little city halls, in general, in this penny-pinching period, has vanished. Its sliver of space now holds the second language facilities.

Compounding the ills of this inadvertent adaptive reuse, the city has cut off Quincy from its past by its hiring practices. The school's academic predicament is part of the Boston school department's predicament. The rapid turnover here has meant a lack of continuity and stability. You can hardly find a teacher or administrator conversant with the early dreams or grounded in their design use. No wonder the amiable assistant principal who escorts a constant round of visitors through the school can't recall its early clustering concept. Once, individual houses were intended to break down this gigantic school into four subschools on the smallest scale. The notion of Sun House, Moon House, Rainbow House, Star and Lightning schools would establish an individual identity and reinforce it with signs and coloring. The units would center on the two-floor library but have the feel of four small schools. That fantasy is gone.

On the very largest scale, the more temperate visions of Tufts-New England Medical Center also changed. The university's dreams of expansion have inflated. The plan for the staged, humane growth of Tufts as a nurturing neighbor is belied by the architectural evidence of its strapping new quarters. Tufts'

Photographs by Steve Rosenthal

giant, high-tech architecture overreaches Stuart and Washington streets. It has earned the enmity of both the Chinese community and those concerned with urbanistic values of streets for people.

Looking over the goals of Quincy is a far less gloomy prospect, however, than such developments suggest. When TAC's architects presented their old Quincy program formally last year, they outlined its original requirements as fourfold:

- "To create a facility which would be clearly recognizable as a community focus and resource;
- "To capture the essentially joyful attitude of the educational program in an architecture which is accessible in both a real and an implied sense;
- "To afford roof-top play (justified by lack of open land);
- "To organize the school into subschools or houses for 180 children each, based upon the school department's system of flexible and changeable space division, containing grades 1-5 with adjacent and separate kindergarten."

Goals one to three were reached and, for all the hard times, are visible; only goal four has vanished with barely a trace.

Finally, if failure is an orphan and success has a thousand parents, Quincy's competing claimants attest to its achievement: The architects, the planners, the community all take—and also often share—credit. In two decades, their ideas and the idea-makers cross-fertilized one other, and, as Field puts it, "While the Quincy School is a delightful and graceful environment, its real importance lies in its expression of the complex fabric of needs imbedded in that particular urban setting."

"It is no accident that early on we started calling it a neighborhood resources center," Field observes, "loading it with an almost impossible task in view of the fragmented base from which we were operating. In many ways it was the prototype for the community school concept that emerged in the '60s. And in spite of all the odds, it's there."

"It probably serves the community at the higher end of the spectrum," Muriel Cohen, education writer for the *Boston Globe,* observes. In a period of social contraction that service may be its most important product.

The Josiah Quincy Community School Project aimed for a comprehensiveness that may seem a pathetic or knee-jerk liberalism today. A search to center "education, wealth, recreation, community services and housing" in one place, it brought both joy and frustration to its designers. If only some architectural fraction of those plans and feelings remains today, perhaps that portion still symbolizes the larger, more humane impulses of the not-so-distant past and carries, one hopes, a promise of those to come. □

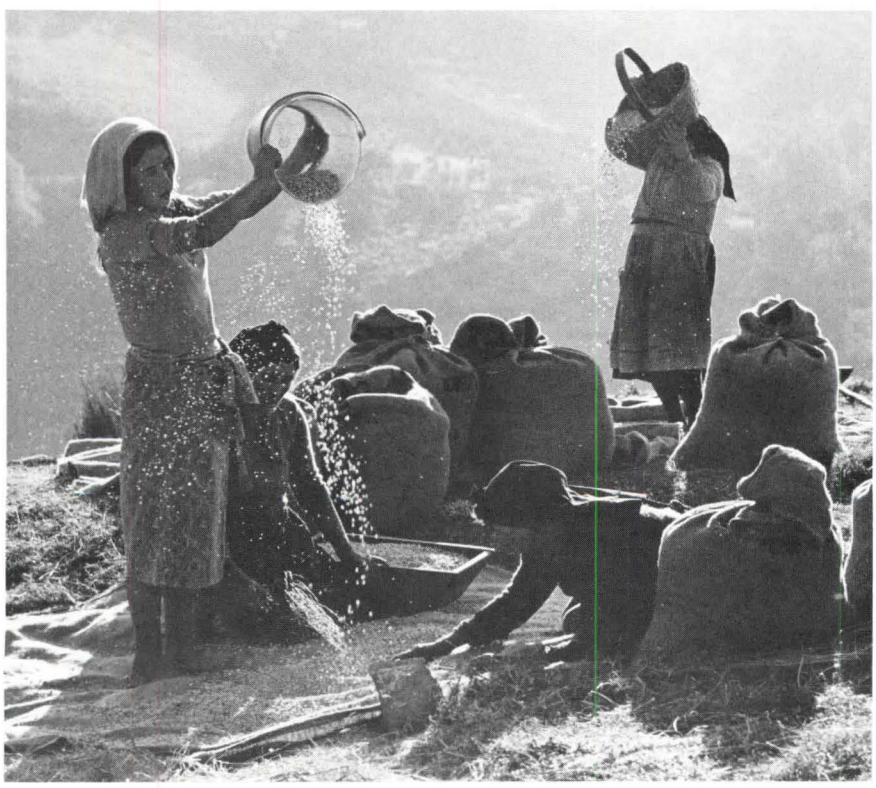
Villages of Iberia

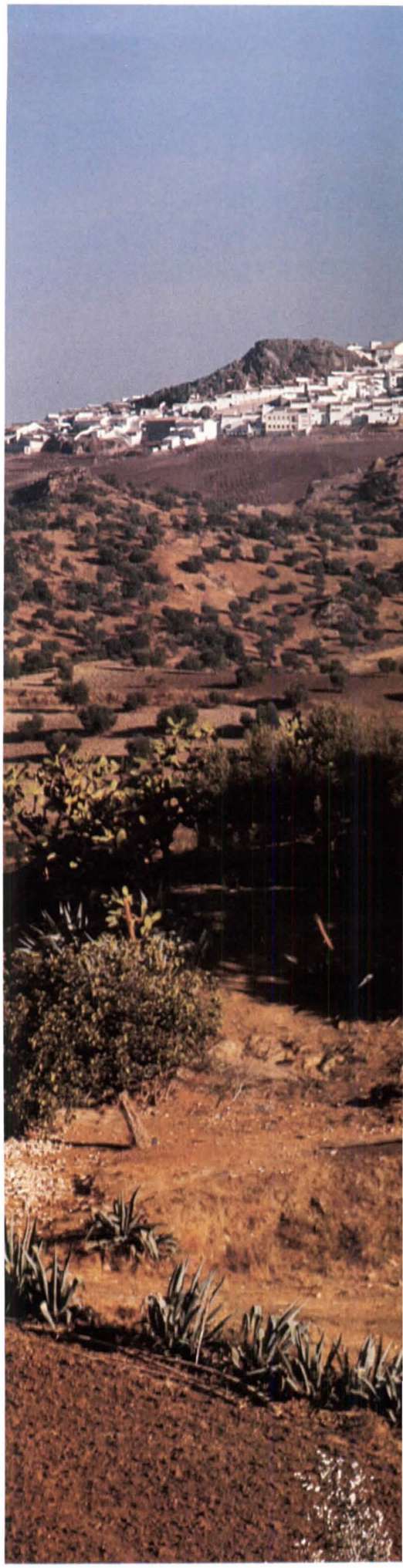
A rich variety of forms and cultures. Text and photographs by Norman F. Carver Jr., AIA

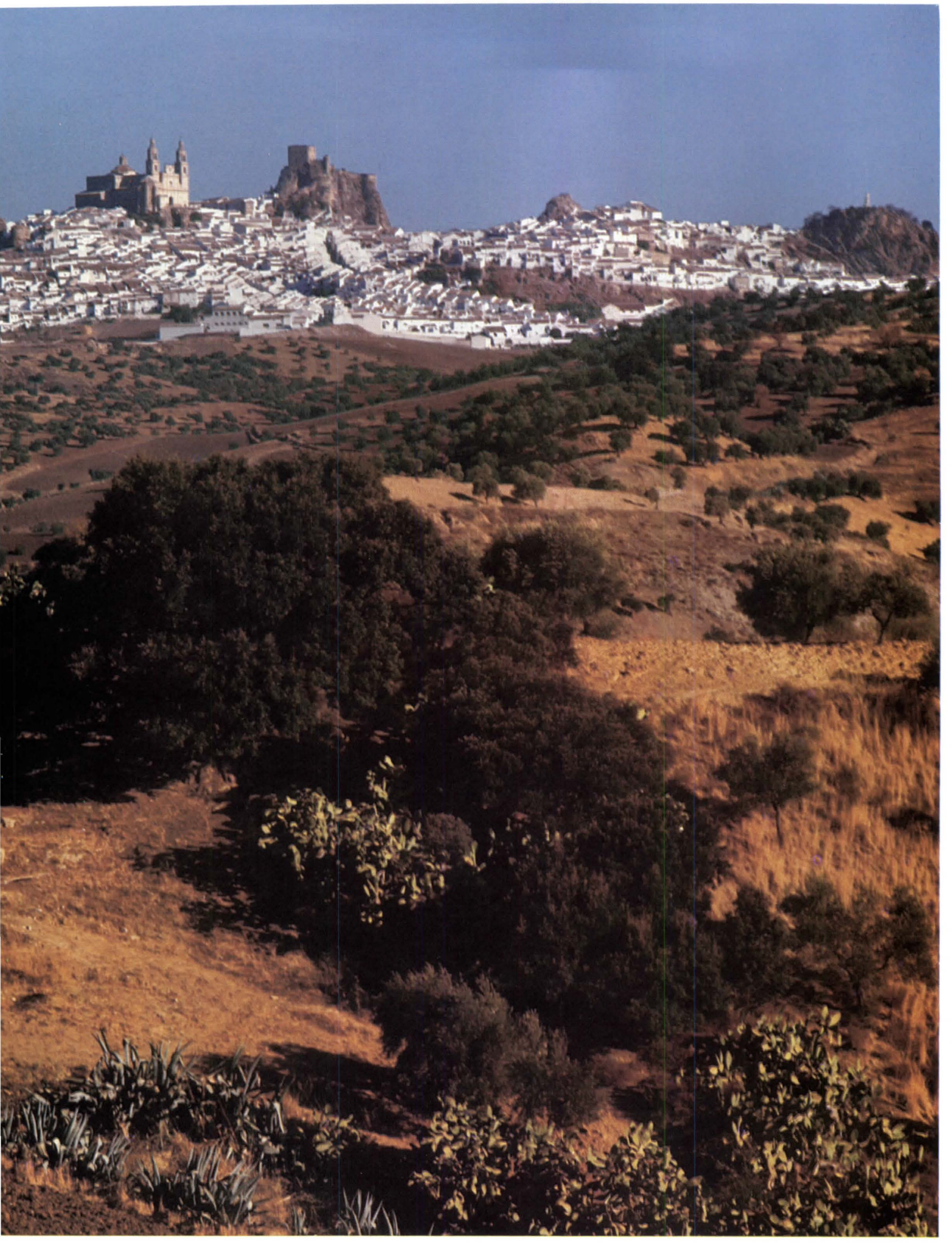
Iberia—wild and remote at the uncharted western end of the Mediterranean—had little contact with the rest of the world until late Roman times. This remoteness, together with extremes of climate and geography and the settlement by culturally diverse groups over the centuries, has provided an astonishing variety of dwellings and building forms. While many villages of the Iberian peninsula are compelling for the casual visitor, it might seem that the inhabitants would have become oblivious to the visual attractions of their native places. But it is difficult to believe that a native of Olvera (right), for example, glancing back at his village from the fields nearby, could fail to be stirred, so brilliant and potent is the image of this white hilltown in southern Spain, or that the women winnowing wheat on a threshing terrace high above a river valley near Guarda, northern Portugal (below), have become inured to the spectacle around them.

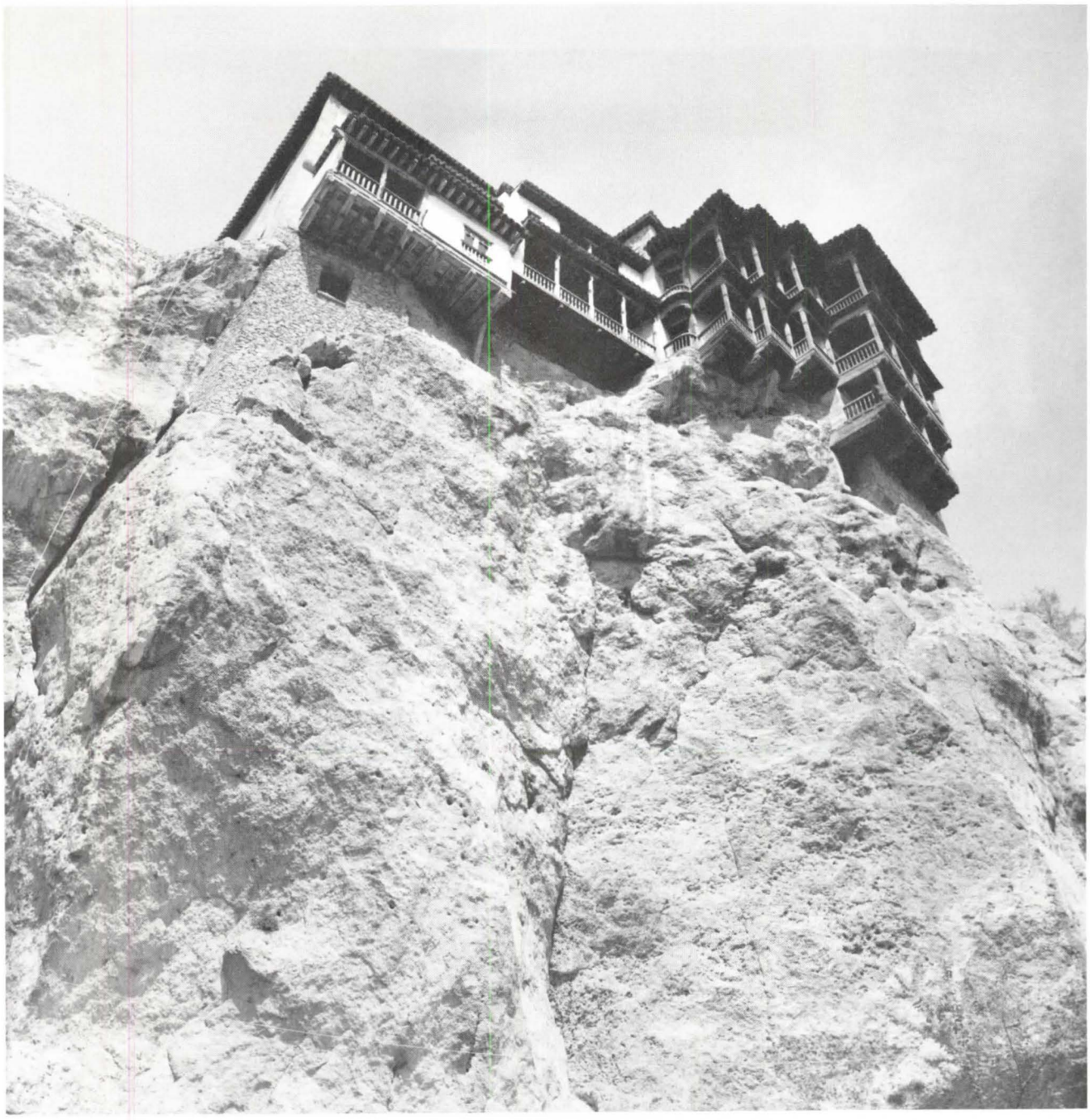
On the next few pages, scenes from northern Iberia—cool, rainy and influenced by Christianity and by the medieval towns of northern Europe; following that, scenes from the very different south—hot, dry and formed by Islam and the casbahs of North Africa.

Mr. Carver practices architecture in Kalamazoo, Mich. The photos and text here are from his new book, *Iberian Villages, Portugal and Spain*. His previous books include *Italian Hilltowns,* excerpted here in December 1979. Information on the books and prices for obtaining prints of these and other photographs are available from Mr. Carver through his publisher, Documan Press, Box 387, Kalamazoo, Mich. 49005.

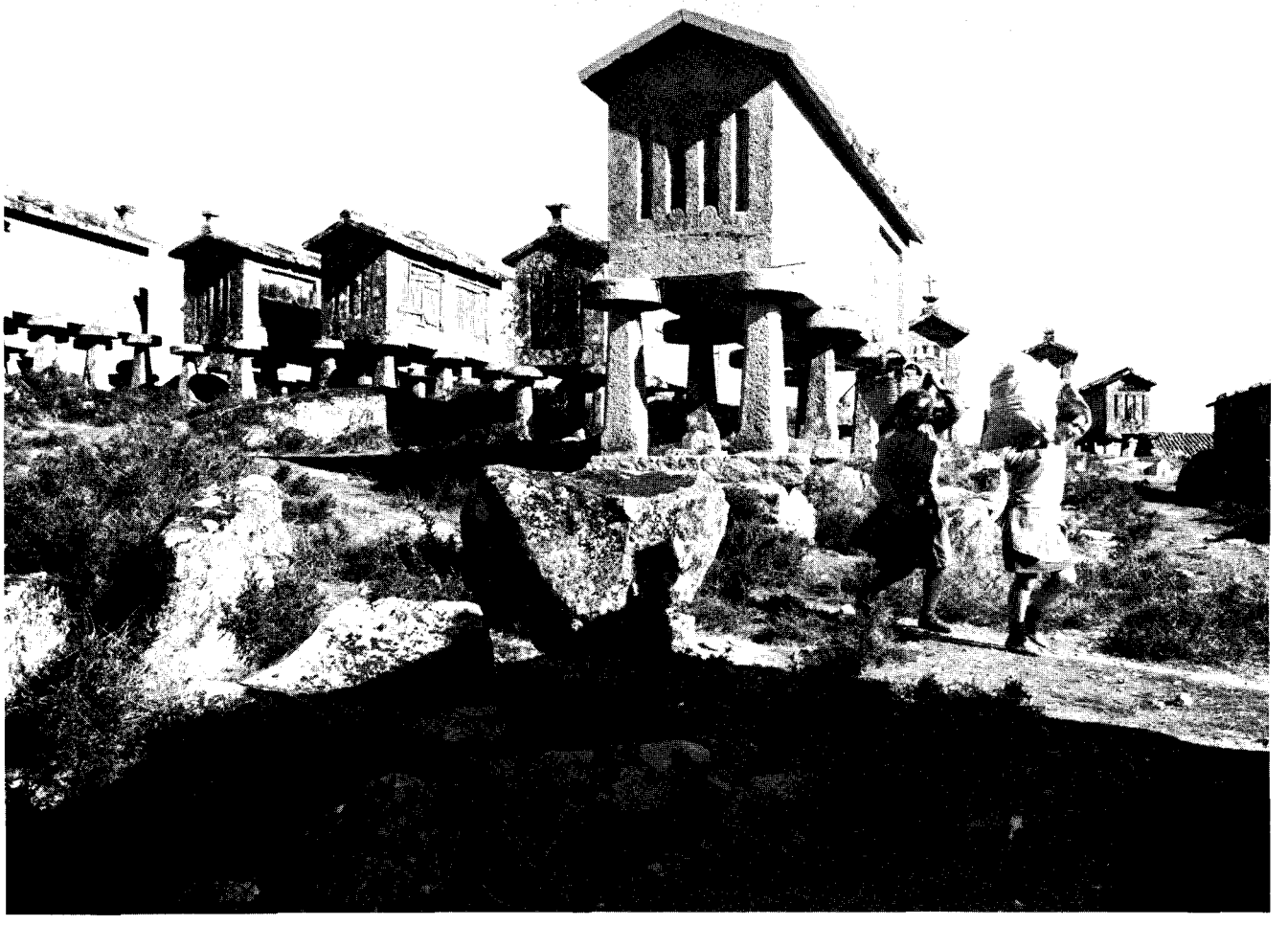


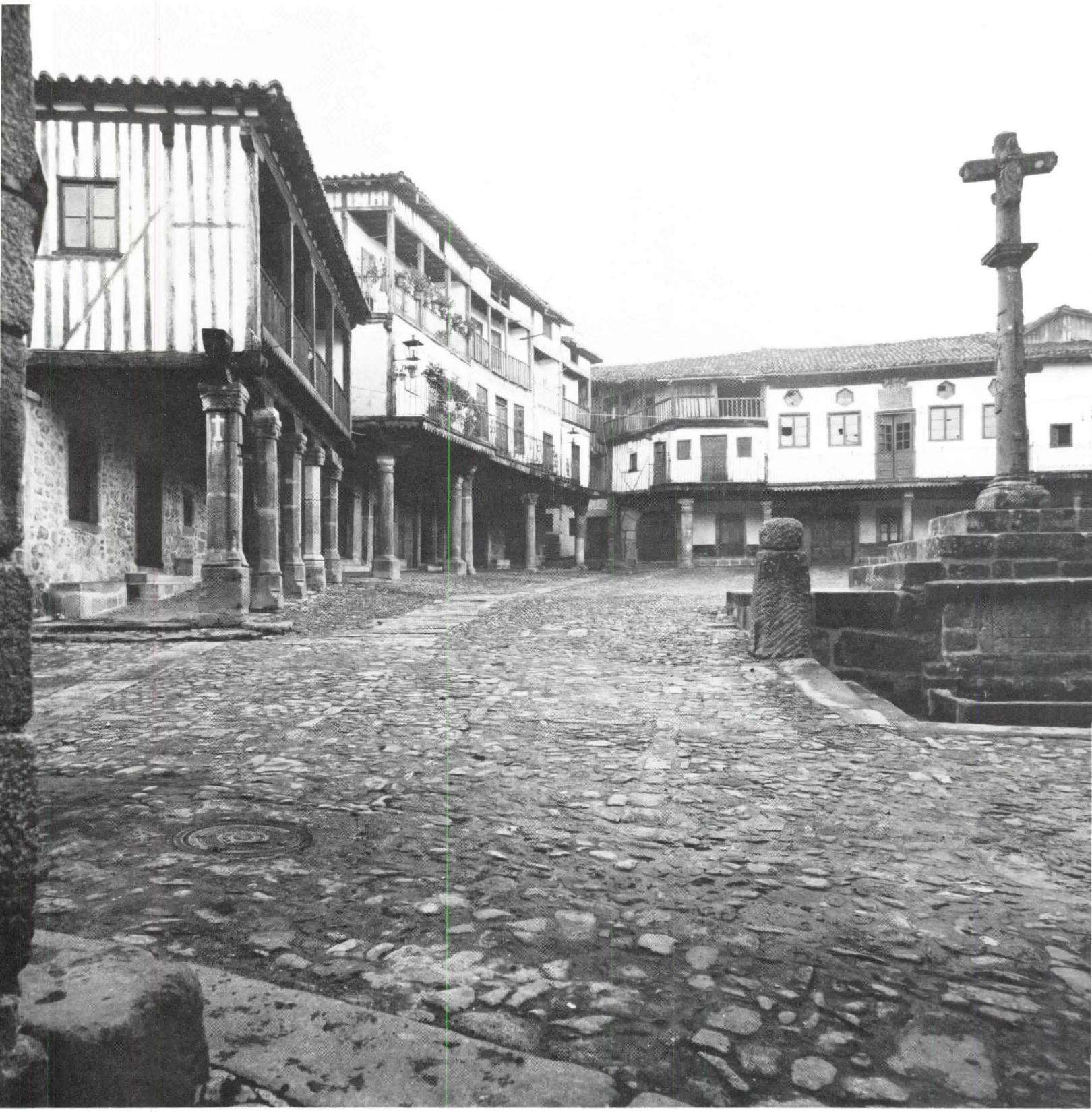


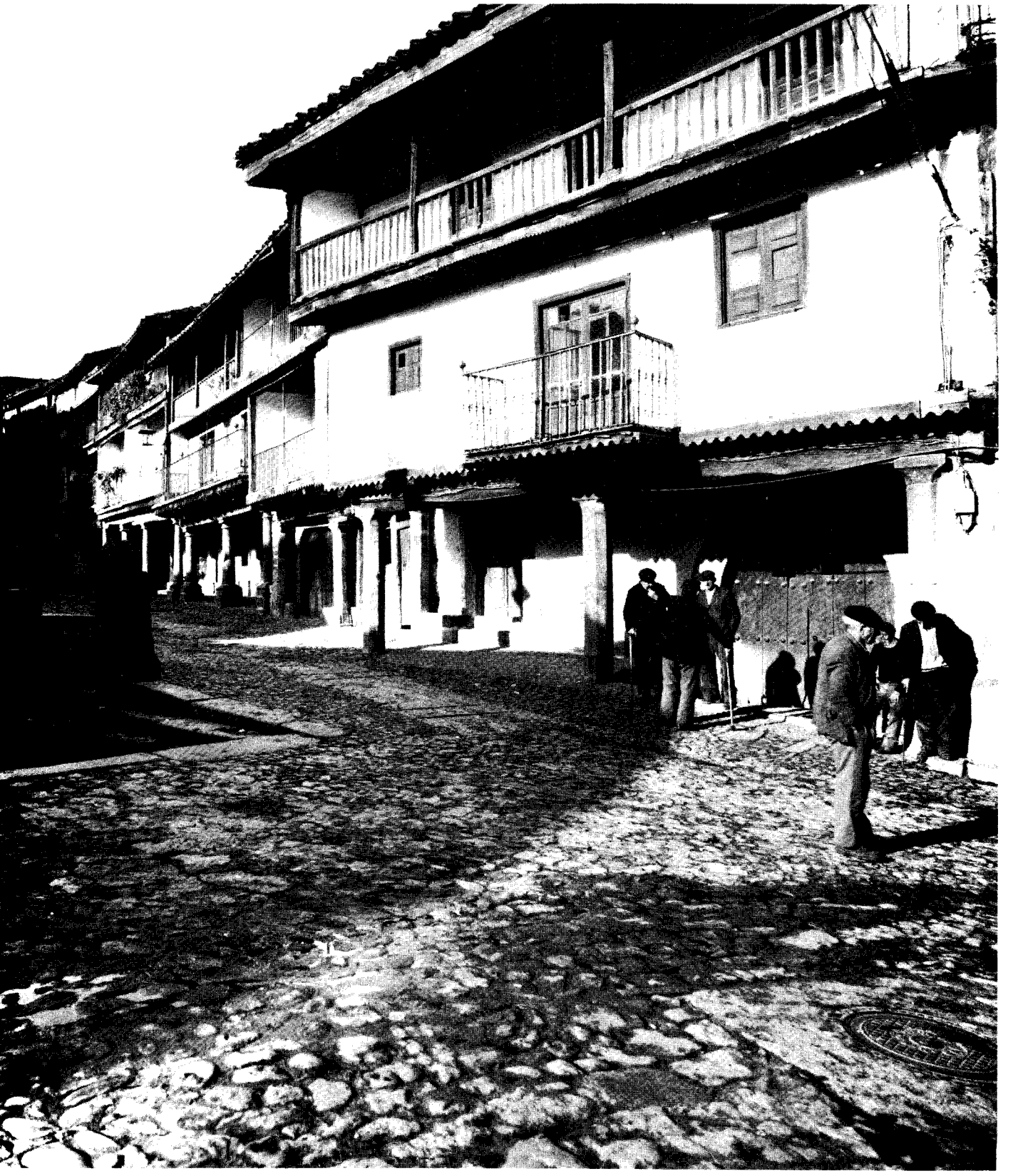




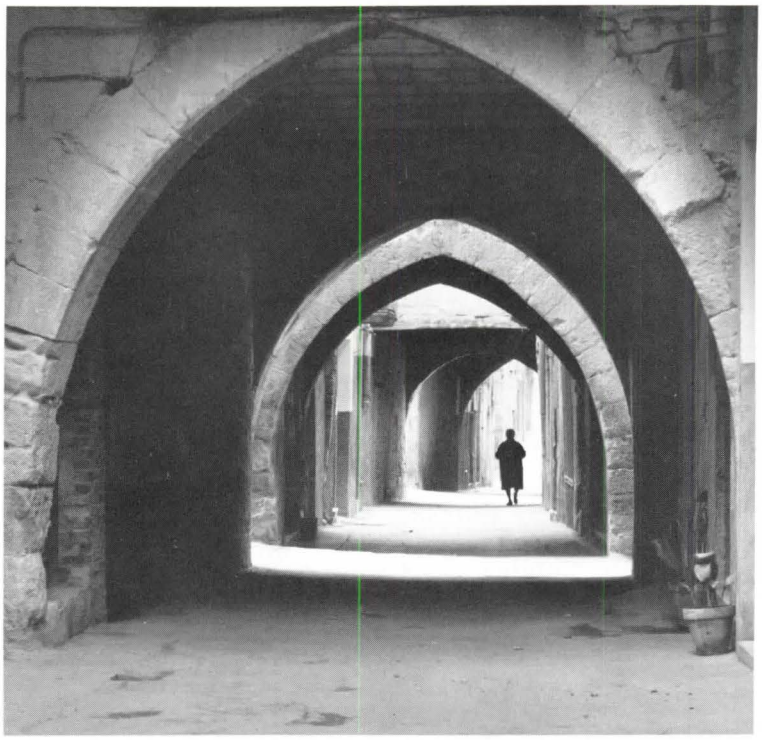
The pressure for building space on Cuenca's hilltop, above, forced these delicate wooden structures to the very brink of the cliff and beyond. Above right, raised stone granaries such as those at Lindoso, Portugal, are common in the northwest of Spain and Portugal; wooden versions are found in the northern mountains of the peninsula. Right and far right, Monsanto, a town built among huge boulders that form part of the houses. The masonry here combines rubble with large smooth stones used structurally as lintels and jambs of openings.







The towns in the mountains of western Spain were long isolated, retaining a medieval flavor unlike any other region in Iberia. This one, La Alberca, is now protected from change by government controls. Its Plaza Publica is surrounded with arcades on three sides, off which open shops, the village offices and a tiny jail; above the arcades are important houses.

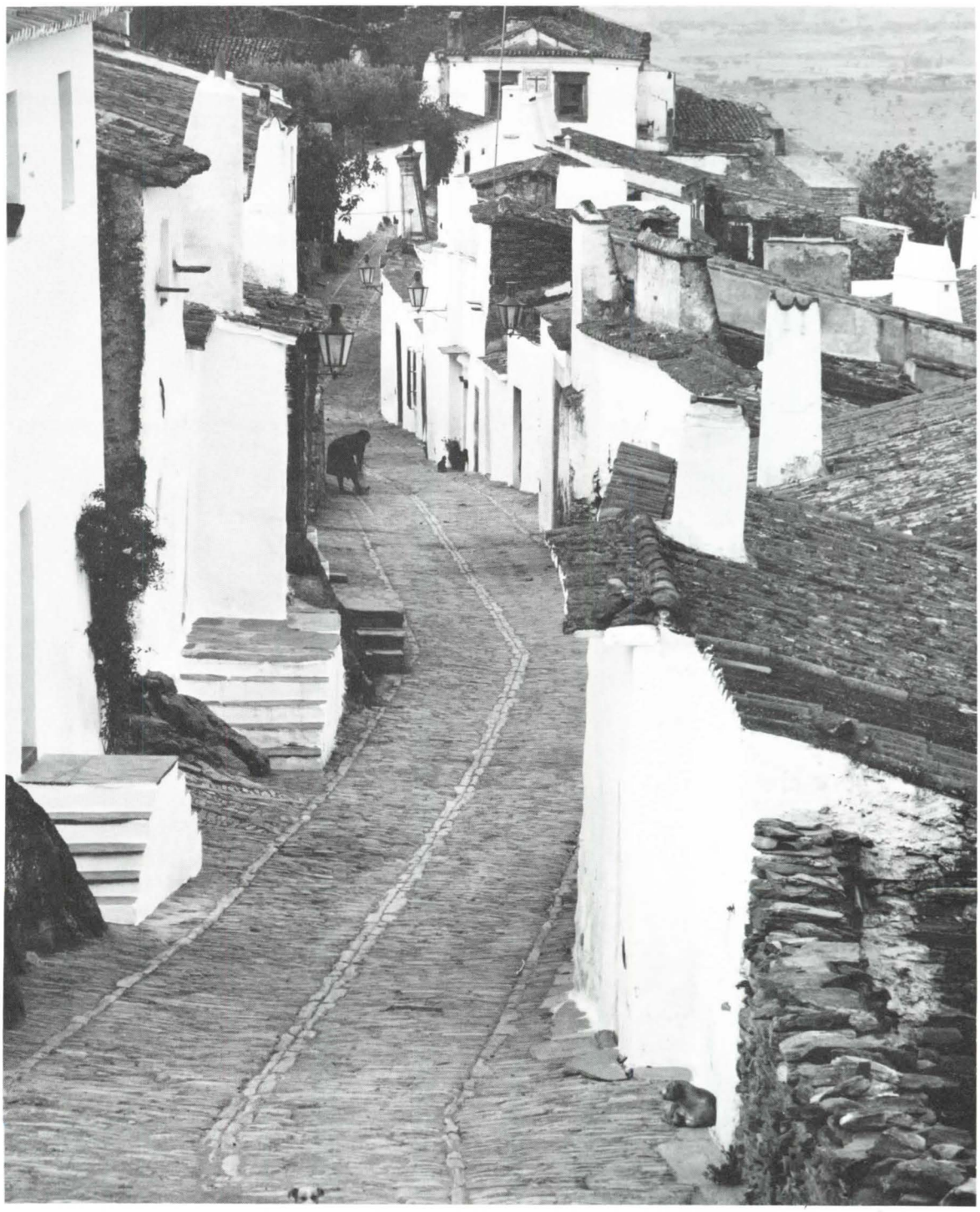


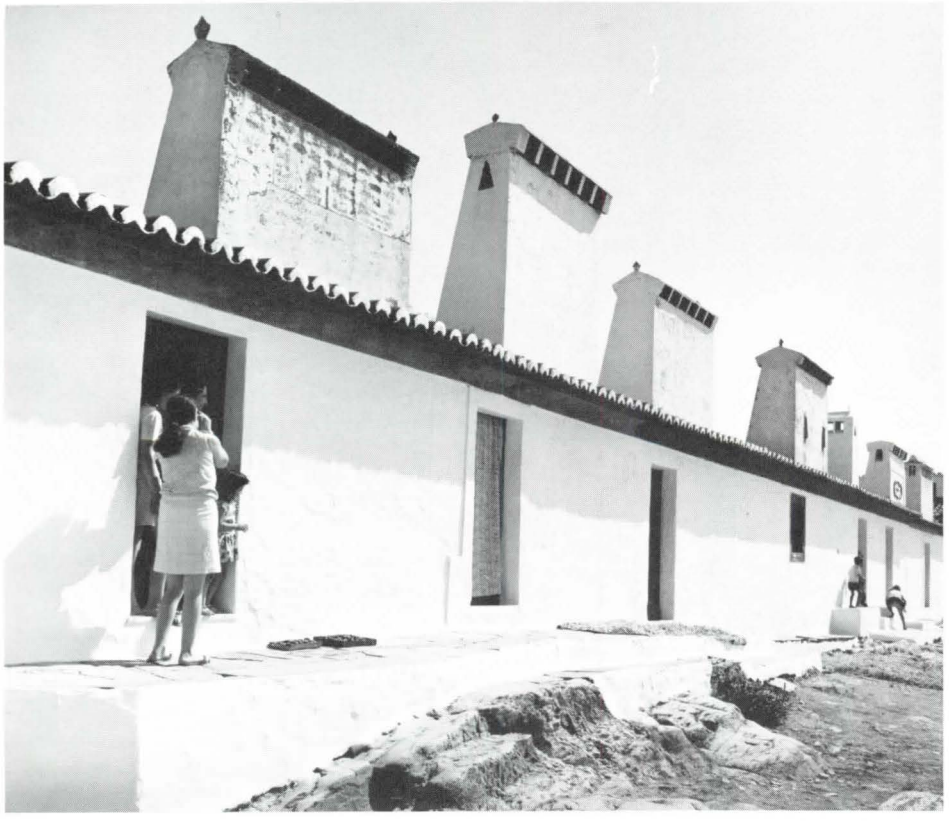
Above left, Moorish arches form arcades over the streets in Batea, a compact town near Barcelona. Left, three- and four-story houses in La Alberca are tightly packed, not for lack of space for expansion, but because of a need for security. Garovillas, above, between Lisbon and Madrid, has a two-level portico on three sides, a reminder of days when the plaza served as the bullring, with viewing from the upper level; it now hosts a market every morning.

Southern Iberia's most ancient houses still in use are cave dwellings. A more conventional southern house is one of simple stone and adobe blocks found all over in the country towns. Their shapes are elemental, but in combination they achieve wondrously complex forms and spaces. Despite the south's Islamic traditions, these houses seldom have interior courts. They are too small, and in the country towns there is less need to escape the press of urban life.

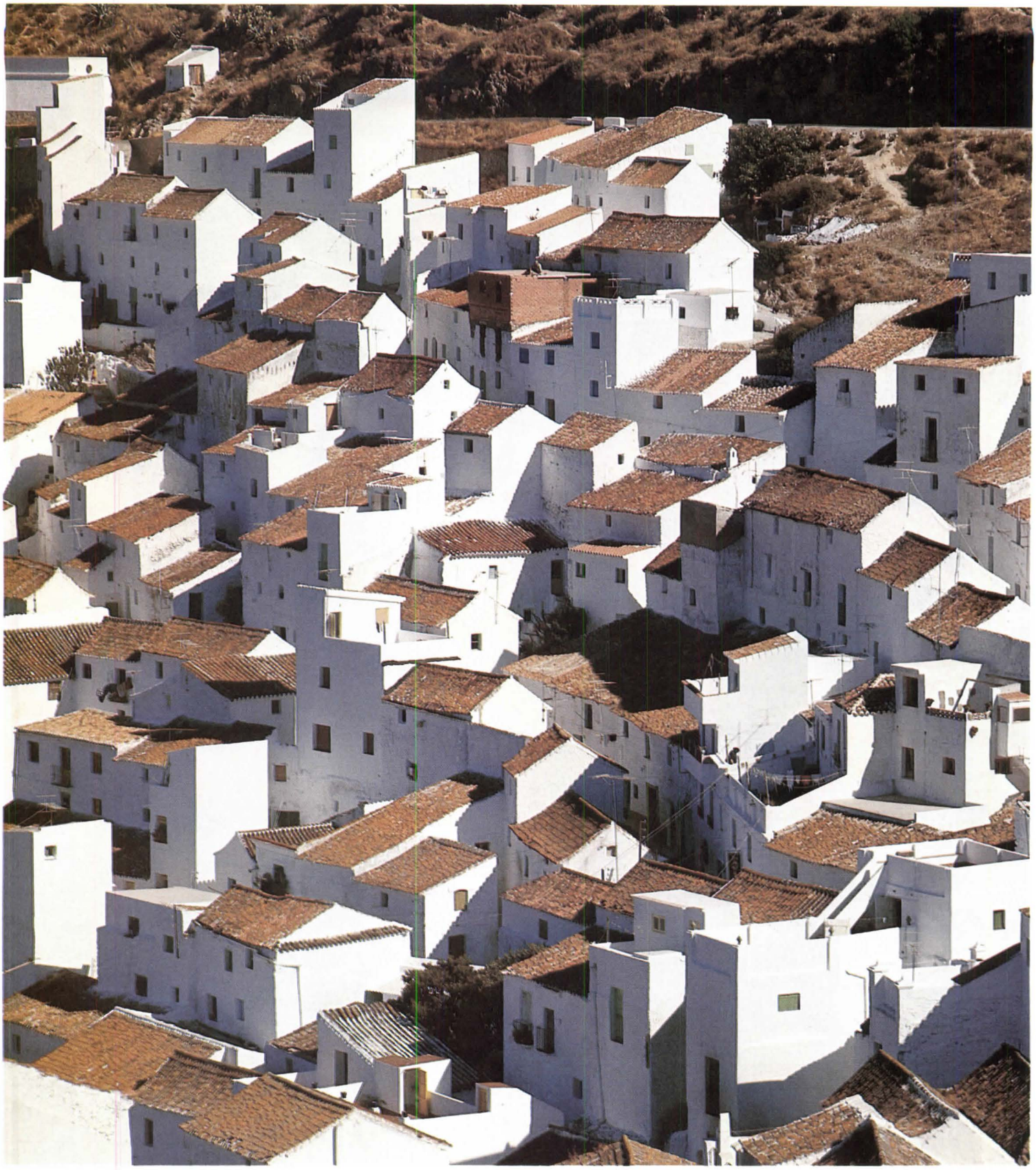
The most spectacular southern villages are the white hill-towns. Most have disappeared, buried under the tourist hotels and condominiums that litter the Iberian coasts, but some outstanding ones still remain in the interior. To visit these brilliant towns is a reminder that man at one time was capable of making an environment of great beauty, sympathetic to nature and himself—and that he may still do so again.

Two views of Monsaraz in southern Portugal, a town epitomizing the differences between Portugese and Spanish villages. In Portugal the pace is slower, the town seems cleaner and, if possible, even more freshly whitewashed.





In the southern Spanish town of Ronda, above left, projecting window bays allow discreet views up and down the street, yet maintain privacy for the women of the house. Above, another view of the Portugese village of Monsaraz, on a hill overlooking the Spanish border. Far left and left, traditional forms in Albufeira and distinctive chimneys in Loule, both in southern Portugal.



Above, the white but dusty town of Velez Blanco; beyond its unpaved streets and simple houses, one of Spain's most impressive castles. Left and far left, Casares, the most impressive of the white hill-towns; at its very top is the town cemetery with above-ground vaults piled high in the limited space.

Upper left, in the Basque region, elemental stonework surrounded by white stucco. Left, a planted courtyard in Alpandere. Above, a street scene in Setenil, between Seville and the sea. □

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The Institute *from page 22*
Registration Boards and its member boards; and that the task force be empowered to continually review the activities of the NCARB and its member boards and report NCARB activities to AIA's board of directors with recommendations for appropriate action by AIA.

- That AIA initiate and fund a comprehensive study addressing the available options and consequences of a variable, graduated or categorized dues structure that will provide the largest opportunity for AIA membership, and that the results of the study be reported to the delegates at the 1983 convention.
- That the Institute urge the U.S. government to (1) seek to negotiate an immediate freeze by all nations on the testing, production and deployment of nuclear weapons and (2) take a leadership role in achieving total nuclear disarmament.

The East Bay Chapter/AIA proposes that AIA reaffirm its commitment to its existing policies in the areas of environmental quality, affordable housing and community development, and that the officers and board be directed to continue to support these policies in the face of continued federal budget cuts.

The Los Angeles Chapter/AIA proposes that an AIA associate steering committee be organized and funded to communicate and represent the goals, programs and resources of AIA associate members.

Three cities—Orlando, Baltimore and Denver—were considered for the 1987 convention. A site committee visited each and met with AIA chapter members, local officials and convention bureau and hotel representatives. The three cities were rated equal in general desirability and architectural interest, accessibility, climate, accommodations and absence of racial restrictions. Orlando scored highest for its meeting and exhibit facilities, component capability and enthusiasm, relative costs and economic incentives.

The committee further recommended, "in view of the projected growth in AIA membership over the next few years," that future consideration be limited to the 16 cities that it believes "can adequately handle" the convention. These are New Orleans, Atlanta, Dallas, Houston, San Antonio and Chicago in the central region; Boston, New York, Washington, Orlando and Miami/Miami Beach in the east, and Las Vegas, Salt Lake City, Los Angeles, San Francisco and Denver in the west. Comprising the site committee were R. Bruce Patty, FAIA; Robert Gramann, AIA, and Francis X. Brown, staff administrator for conventions.

Action on St. Bartholomew's was taken on a request by the New York Chapter/AIA. The board carried a statement of support for preservation of the church, "together with its community house and garden, and opposes development plans which would significantly alter the architectural composition of the property." Endangered is the community house adjoining Bertram Goodhue's 1919 Byzantine church on Park Avenue. By a narrow vote, the congregation has voted to tear down the community house and build a highrise speculative office tower on the site. Edward Durrell Stone Associates has designed a tower that incorporates the front of the community house.

AIA is already on record opposing the project. Last October, Institute President R. Randall Vosbeck, FAIA, sent a letter to the rector, Mayor Edward Koch and others saying the ensemble of buildings and gardens "should be preserved for future generations to enjoy complete and intact. The entire property is to be regarded as a single composition."

The board also accepted membership in a committee known as "Save St. Bartholomew's: the Landmark Sanctuary, Community House, Terrace and Garden," an organization of 12 other groups including local chapters of AIA, the Victorian Society in America and the American Society of Landscape Architects, as well as the Municipal Art Society of New York and the Architectural League.

In other business, the board authorized a crisis response system—a series of measures to be implemented when "disasters and other crisis situations" require response by the Institute. A crisis management team comprised of Institute staff would work with a field component team drawn from a roster of prequalified individuals available on short notice to proceed to a crisis site. A resource library at AIA headquarters and "crisis field kits" for use by AIA components and affected architects are other recommendations of the "crisis management task force," which was authorized last September and seeks implementation of the response system by the first of next year.

Notter, Parker and Rose Are Candidates for '84 President

Three Institute members—George M. Notter Jr., FAIA, Ray K. Parker, AIA, and William A. Rose, FAIA—are candidates for the post of 1983 AIA first vice president (1984 Institute president), and four more are up for the three vice presidential slots. Delegates to next month's national convention in Honolulu will elect the 1983 slate, which will take office this December.

Notter, principal in Anderson Notter Finegold of Boston and Washington, D.C., is a former AIA board member and Institute vice president. He also has served on national committees on design, urban planning, regional development/natural resources, finance, long range planning and historic resources. He was president of the Massachusetts State Association/AIA in 1978 and of the Boston Society/AIA in 1976. He holds a B.A. from Harvard College and a M.Arch. from Harvard graduate school of design.

Parker, also a former Institute director and vice president, is chairman of the Direction '80s task force. He was a director of the AIA Research Corporation and a board member of PSAE. A senior principal of Cromwell, Truemper, Levy, Parker & Woodsmall, Little Rock, Ark., he holds a B.S. from Arizona State, a B.Arch. from Auburn and a M.Arch. from Rice.

Rose, a general partner in Rose, Beaton & Rose, White Plains, N.Y., is a current Institute vice president and a former board member. He has chaired the Research Corporation board, was a member of the government affairs commission and currently represents AIA on the Committee on Federal Procurement of Architectural and Engineering Services. He holds a B.Arch. from Harvard and a M.Arch. from Columbia.

For vice president the candidates are Leroy E. Bean, AIA, John A. Busby, Jr., FAIA, Thomas B. Muths, AIA, and R. Bruce Patty, FAIA. All four are board members whose terms expire this year.

Bean, president of Architecture Inc., Sioux Falls, S.D., is a past president of the South Dakota Chapter/AIA and of Dakota States Architects. He holds a B.Arch. from the University of California, Berkeley, and has lectured and taught at Sioux Falls College and South Dakota State.

Busby is executive vice president of Jova Daniels/Busby, Atlanta, and a past president of the Atlanta Chapter/AIA and of the Georgia Association/AIA. He holds two degrees from Georgia Tech.

Muths, who practices in Jackson, Wyo., has served on the President's advisory council on historic preservation and the board of the National Trust for Historic Preservation. He was president of the Wyoming Chapter/AIA and chaired the national AIA committee on historic resources. He holds a B.Arch. from the University of Washington.

Patty was chairman of the 1979 national convention in Kansas City, where he is a principal in Patty Berkebile Nelson Associates. He is a former president of the Kansas City Chapter/AIA. He holds a B.S. in architecture from the University of Kansas and serves on the advisory board of its school of architecture and urban design.

Harry Harmon, FAIA, of Long Beach, Calif., is running unopposed for re-election as secretary, and Henry W. Schirmer, FAIA, Topeka, Kan., is to fill out his two-year term as treasurer. □

Sophisticated Affirmation of Indigenous Riches

Eight essays to accompany a new exhibition, reviewed by Donald Watson, FAIA

Eight distinguished essays and an introduction by James Marston Fitch present the case for indigenous and vernacular shelter in *Shelter: Models of Native Ingenuity,* providing sophisticated evidence that the cultural and environmental context is the basis of a richly varied, adaptable and relevant architecture.

This is hardly a new argument. The same point inspired Bernard Rudofsky's exhibit of photographs at the Museum of Modern Art and subsequent publication, *Architecture Without Architects,* in 1964. Earlier, editor Fitch's article in *Scientific American* (1960), "Primitive Architecture and Climate," brought to the public's attention the fit between climatic needs and appropriate design achieved in native architecture. Nevertheless, the Katonah publication indicates that these ideas have matured through the career-long research of Amos Rapoport, Ralph Knowles and Richard Stein, among others, who have contributed essays. In addition, this publication contains new work and some surprises.

The alert reader will note, in the message that indigenous architecture emulates the principles of cultural and environmental fit, an implied critique of current architecture. In his introduction, Fitch argues that ". . . unlike Western painters and sculptors, Western architects generally seem to be impervious to the esthetic appeal or functional potentials of primitive or folkloristic idioms. In short, the preindustrial past (excepting always the eclectic Greco-Roman tradition) seemed to modern architects to have no significance, either practical or poetic."

The potential to learn from the principles of indigenous architecture is set forth in the eight essays, remarkably without polemic, in a thoughtful and balanced discussion. In what is perhaps his last published piece, the late René Dubos brings to the argument the biologist's perspective of the intricate relationship—symbiosis—between the human organism and the physical environment. Despite enormous differences in geography and climate, "all human groups are still fundamentally identical in their physiological requirements and probably also in their psychological drives and emotional needs." Nevertheless, "what people want is so largely determined by traditions and expectations that no type of shelter can be universally acceptable even if it satisfies completely all the biological needs of human beings."

For Dubos, this provides evidence of the need and capacity for diversity as both a cultural and biological requirement of the human species: "The search for unorthodox places may have its origin in the instinct for exploration and adventure." This leads to: "In the final analysis, the first and most important steps in design are those that involve choices about human ways of life rather than about technical problems. . . . Before designing shelters we must therefore ask ourselves some basic questions concerning how we want to live, what we want to become and how we want our societies to evolve."

Each of the other essayists finds in indigenous architecture the same richness and the potential for "fit" between culture, environment and building. Richard Stein: "Not only the heating, but the cooling, ventilation, illumination and general comfort as well must be provided as extensively as possible through the design of the building skin, which in turn can serve only a limited area in from the facade. Once these modified demands are accepted as the basis for making design decisions, the principles extracted from the vernacular buildings are as important to the design process as the rules of grammar are to writing."

Ralph Knowles offers from his important new book, *Sun Rhythm Form,* the observation that the solar orientation and the resulting microclimate of the pueblo architecture of the American Southwest matches the daily and seasonal activities and rituals of its inhabitants. Mary Mix Foley, in her essay, "The Well-Adjusted House," provides an excellent discussion of the adaptations to local climate and material resources of early American house styles.

Raymond G. Studer discusses connections between behavioral factors and the physical environment, arguing for a self-correcting and responsive design process to approach the sort of fit achieved in the unself-conscious design process of native architecture. Of all the essayists, Studer has the one caveat, "Given precisely the

continued on page 68

Eliot Elisofon/Museum of African Art

View of a Dogon village and toguna *(shed in which council meetings are held), Mali.*

Mr. Watson currently chairs the environmental design program at Yale's school of architecture. He edited *Energy Conservation Through Building Design* (1979).

Shelter: Models of Native Ingenuity. James Marston Fitch, consulting editor. (Katonah Gallery, 28 Bedford Road, Katonah, N.Y. 10536. $8).

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same technological constraints and sociocultural requirements, could the contemporary design match the accomplishments of the indigenous builder? Probably not; but this is no reflection on the latter's competence, only the former's place in the sociogenetic, ecosystemic process."

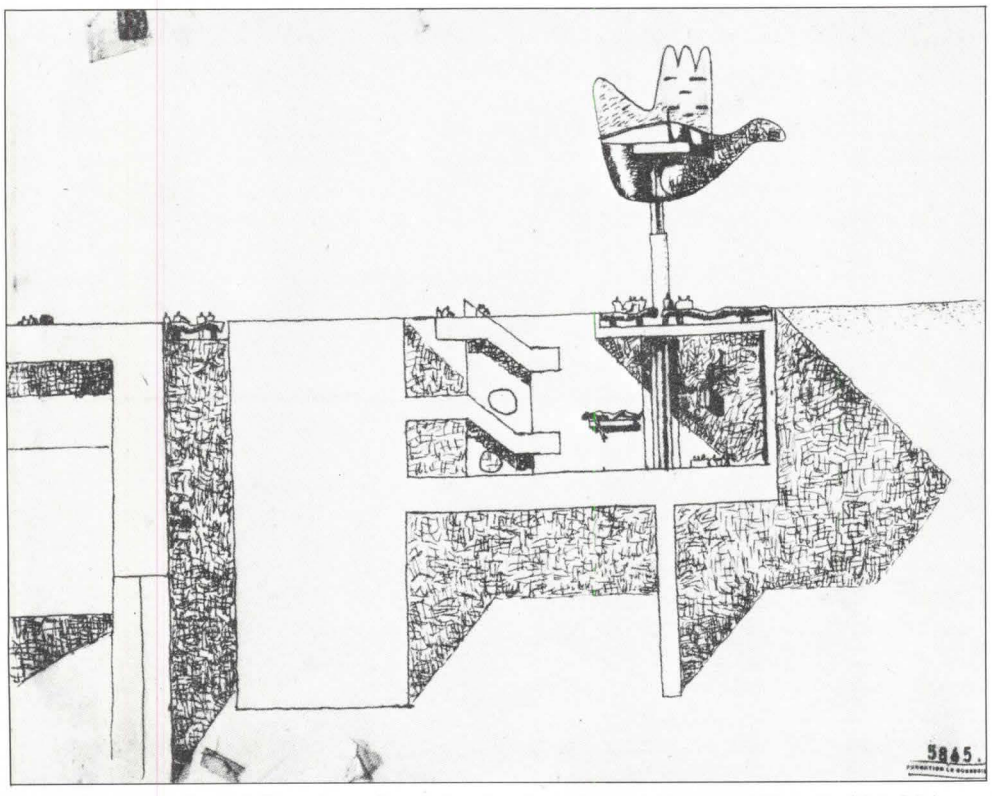
Amos Rapoport offers in his essay a distillation of his thinking about vernacular architecture since he published *House Form and Culture* in 1969. More than the others, Rapoport attempts to incorporate the principles of vernacular design into a workable theory of architecture: ". . . one must deal with vernacular *design* rather than vernacular architecture. It is a truism, but one often forgotten, that people do not live in buildings alone. They inhabit and use a system of settings that includes buildings of many types, streets, open spaces, settlements—in a word, cultural landscapes." Rapoport's thinking is not one-sided in favor of vernacular: "Conventional histories of architectural and urban design suffer seriously by ignoring the vernacular context that comprises the major part of an environment; the study of vernacular design suffers, in turn, from the lack of concern with the contrast between it and the monumental and other high-style elements." Rapoport also puts forth a further reason why the study of vernacular architecture is important: "to save them not as museum pieces but as living systems. If this is to happen, much greater sensitivity is needed to their value—as objects of study, as an irreplaceable cultural and environmental 'gene pool,' and also as important objects in their own right."

All of the above-mentioned authors have published previously. Their research related to indigenous building and environmental design theory is well known. The surprise of this volume is in an essay by Labelle Prussin. By reference to documentation of the indigenous West African building, Prussin provides a discussion of design principles that integrate cultural and environmental requirements. She particularly illuminates the need for spatial orientation: "Achieving a sense of security—hence protection—in 'knowing where you are' involves establishing a conceptual model of territoral space. Without the capacity for spatial orientation, a person is quite incapable of effective locomotion or coordination. Psychological reality and well-being . . . require an awareness not only of oneself, but of one's position in some social and spatial scheme. Spatial orientation is thus essential to man's existence; spatial disorientation is tantamount to extreme psychosis."

Her examples from West Africa illustrate this hypothesis. What appear to be simple shelters in esthetic and technical terms are complex psychological and cultural statements, means of "taking possession of space," defining social and religious rituals: "Just as a dancing circle can become the penultimate symbol of protection—and sacrality—so a circle of stones is the appropriate site for a diviner to communicate with the powers of the supernatural."

From the evidence of indigenous models, Prussin then concludes with the conjecture, "In the contemporary Western world of high technology, of geometrically ordered living environments and open-ended infinity, of impersonal, bleak and barren surfaces, of increasing mobility and transience, and the disintegration of behavioral prescription, it [the sense of security of knowing where you are] is perhaps the concept that has the greatest relevance for society-at-large."

In reviewing these essays, I am reminded of how one of the leading publicists of postmodern architectural theory introduced a lecture a few years ago by stating, "Architecture is comprised of behavior, environment and form. Since I know nothing about environment or behavior, I will restrict my discussion to 'form.'" The essays in this publication offer convincing testimony, based upon timeless ways of building in context, that such know-nothingism is inexcusable.



***Le Corbusier*: Selected Drawings.** Introduction by Michael Graves. (Rizzoli, $15.95.) "The referential drawing may be thought of as the architect's diary or record of discovery," says Michael Graves in the book's introductory essay. "It is a shorthand reference which is generally fragmentary in nature, and yet has the power to develop into a more fully elaborated composition when remembered and combined with other themes." Le Corbusier's drawings, Graves says, have appeal because they record his "search for what he considered a rational basis for architecture." The book contains 240 illustrations, 21 in color, of 20 of Le Corbusier's buildings and projects. Shown above is a drawing in China ink (1952) of a section through the Open Hand monument for Chandigarh.

The Moore House: The Site of the Surrender, Yorktown. Charles E. Peterson. (National Parks and Conservation Association, $9.95 hardbound, $4.95 paperbound.) **Inventing the I-Beam.** Charles E. Peterson. *(Bulletin of the Association for Preservation Technology,* vol. XII, no. 4.)

Between the first (1935) and the second (1980) of these contributions to historic preservation lies the professional career of one of the most prolific and significant figures in American architecture, spanning a half a century. Charles E. Peterson, FAIA, appears to have sprung, fully formed, into the front rank of his chosen field at Colonial Williamsburg and the National Park Service. He thus illustrated Charles B. Hosmer's thesis (in *Preservation Comes of Age,* see Oct. '81, page 88) of professionalism in the preservation movement that was generated by these two experiences. Peterson's career illustrates how interconnected they were—on the Virginia peninsula.

The Moore House is a classic case study in preservation methodology, illustrating Peterson's belief that "any architect who undertakes the responsibility of working over a fine old building should feel obli-

gated to prepare a detailed report of his findings for the information of those who will come to study it in future years. Such a volume should become a permanent part of the building—a payment by the architect for the privilege of learning and using facts which no other man may have."

Since this declaration in 1935 when Peterson first wrote his report, thousands of historic structures reports have been prepared, and his initial effort continues to serve as a model. Here, in archeological data, measured drawings, historical photographs and drawings, and the documentation of structural details, and in narrative recording interviews with the sources who have since disappeared, we have the architect's synthesis and interpretation of a mass of data otherwise unavailable. It is a contribution to professional development and public understanding to have this work in this form.

But almost immediately, Peterson became recognized for his contribution to the detail of architectural history, and *Inventing the I-Beam* reminds us of the many similar findings he recorded in various places, but especially in the *Journal of the Society of Architectural Historians*. This is fascinating detective work, a sort of *Notes and Queries* in architectural terms, to be enjoyed for itself as well as being a valuable part of architectural and cultural history. The schism that produced the Historic American Buildings Survey and the Historic American Engineering Record might have been avoided had the unifying philosophy that pervades this study been more characteristic of the preservation movement. *Frederick Gutheim, Hon. AIA, Washington, D.C.*

Building Systems Industrialization and Architecture. Barry Russell. (Wiley, $71.)

This book is an extraordinarily thorough effort to document the history and architecture resulting from building systems design. Starting with a question of scale, as raised in Japanese architecture and the evolution of building systems that responded to that scale, Barry Russell presents an unvarnished look at the successes and failures of standardized building systems, giving heaviest emphasis to the European experience, most notably Great Britain, in the 1960s and '70s.

The book's strong point is the author's ability to weave sociology, construction techniques and conceptual design development into a linear history. The majority of the works presented are either in the residential or educational area. Russell discusses their successes (which were limited) and their failures (which were technical and political). What comes from the text is a clear picture of the proponents of standardization who had a strong conceptual model of a desired result and the rhetoric necessary to get trial programs and projects under way, only to be undone by technical details that often had drastic consequences for the users, owners and inhabitants.

The book is straightforwardly written, giving strong graphic illustrations that depict the component systems. Russell's presentation also deals with the evaluations of economics, more often than not on the scale of large complete systems; questions of design refinement, especially in sizing various components, and the subsequent repercussions of the system on the physical structure.

What the book is not is a mere compendium of uncritically gathered building pieces. Russell's ability to speak to the *systems* as different from those *pieces* is the strength of his book. *William Hooper, AIA, Director, Practice Division, Institute Headquarters*

Washington Itself. E. J. Applewhite. (Knopf, $8.95.)

If you are into the lore of Washington, D.C., architecture, you will probably want this book—but you will have a hard time deciding where to shelve it and what to do with it. A gossipy, anecdotal collection of short, critical essays on selected Washington landmarks by a writer whose special interest in architecture has stimulated

continued on page 70

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quite a lot of homework, about sums it up. It certainly is not a guidebook to take the place of the AIA guide or *Washington on Foot*. Although organized by geographical sections of the city, it reflects no underlying ideas of neighborhoods or urban structure. It makes no effort to completeness, system or unity. Nor is it an architectural history.

Still, there are many things here said that you can find nowhere else. One is frequently entertained as well as illuminated. But that isn't enough. A look at the (inadequate) index under such headings as churches, embassies or museums and galleries (a big entry) gives this subjective show away. In waspish accents, here are unrestrained enthusiasms and unforgiveable omissions. What can be found in no other Washington book—20 pages of architects' names and their local works—is not matched by any treatment of them or even any way to find out where they appear in the text.

The drawings by Fred H. Greenberg have a Flaxman-like charm and architectural awareness. Rather than quotations from the *New York Times* or the *Washington Post* stable of critics that frequently suggest the need for reconsideration, Applewhite should have told us what he thinks—as he does on such occasions as his treatment of the Mayflower Hotel, the Lars Anderson house or the Kennedy Center—warm, intimate, interesting. With more blue penciling, this could have become the Washington insiders' book that is buried under worthless subjects and junky indiscretions. *Frederick Gutheim, Hon. AIA, Washington, D.C.*

Cost Estimating. Rodney D. Stewart. (Wiley, $31.50.)

Although this book is not directed to the construction industry per se, its basic principles and methodology are applicable. Rodney D. Stewart, who is president of Mobile Data Services and has had a varied experience in cost analysis, says that the two motivators in increasing productivity in any process, project, product or service are making a profit and providing the most efficient work output. He emphasizes that before any job is started it is essential to have an accurate estimate of the cost necessary to complete it and also to have effective management within the established cost restraints. "A company that consistently bids high will lose business to the ones that bid low. On the other hand, bids or estimates that are consistently too low will result in a loss of profit; and a company cannot reap a negative profit very long and still stay in business."

The author gives the basics of estimating, explaining such matters as the development of a work schedule, defining the

work, how to estimate both direct material costs and labor rates and indirect costs and administrative costs. He explains in detail how to establish fee, profit and earnings. He also considers such variables as inflation and energy resources and covers life cycle costing and value engineering. The final chapter of the book is an actual case study in cost estimating.

The book is logical in its development and should prove useful to architects who want to know more about the fine art of cost estimating.

Steel Diaphragm Roof Decks: A Design Guide with Tables for Engineers and Architects. E.R. Bryan and J.M. Davies. (Wiley, $19.95.)

Metal decking, this book explains, is used on nearly all industrial buildings, schools and office structures. The roof can be constructed without bracing by means of stressed skin design. "Bracing flat roofs is undesirable for architectural and economic reasons, and diaphragm design becomes the most attractive solution to the problem," the authors say. The book gives tables and worked examples for flat roof designing. Detailed technical knowledge is not required, the authors comment, because values for the strength and stiffness of steel roof decks when acting as diaphragms are provided. The book's first part gives rules and tables for standard diaphragms, and the second part considers general design codes and tables for diaphragms. The authors, whose works on stressed skin design have appeared in many forms, are British structural engineers.

Handbook of Building Crafts in Conservation: A Commentary on Peter Nicholson's "The New Practical Builder and Workman's Companion," 1823. Edited by Jack Bowyer. (Van Nostrand Reinhold, $46.)

Peter Nicholson (1765-1844) was a self-taught architect (additions to the University of Glasgow, planning of the new town of Ardrossan in Ayrshire, Scotland, country houses). He was best known, however, for his many publications, the most widely used being *The New Practical Builder and Workman's Companion,* first published in 1823 and reissued in 1837, 1847, 1848-50, 1853 and 1861. The book, as its title indicates, gave practical advice on matters pertaining to architecture and building in the early 1800s.

Much of the text of Nicholson's work is contained in this volume, as well as some reproductions of the handsome old copper plates. This edition also includes commentary on Nicholson's text by 12 contemporary specialists in conservation and restoration. They bring Nicholson's work of 1823 up to date, supplying information on current technologies in masonry, brickwork, carpentry, joinery, plumber's leadwork, slating, glazing, plastering and painting. The comments are supplemented by new line drawings and black and white photographs. The book will be useful to both architects and craftsmen for its insights into the preservation of old structures.

Building Failures: Diagnosis and Avoidance. W. H. Ransom. (E. & F. N. Spon, London, published in the U.S. in association with Methuen, Inc., 733 Third Ave., New York, N.Y. 10017, $19.95 hardbound, $9.95 paperbound.)

This concise book of 174 pages was written by a British authority. It isn't lack of basic knowledge that causes most building failures, he says, but rather nonapplication or misapplication of the knowledge. He discusses briefly the agencies that cause building deterioration, among them moisture, manufactured products and pollutants of air. He says that most defects occur through the effects of external agencies, with water having the prominent role. Hence, he gives a entire chapter to the place of moisture in building deterioration. Also discussed are the durability of materials, foundations, floors, walls, cladding, doors and windows, roofs and HVAC systems. □

2

1

3

Furnishings

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

Just over a year ago, our Furnishings section featured an extraordinary skyline-shaped sofa called "Tramonto a New York" (Sunset in New York). You might reasonably have thought it just a curiosity, and perhaps it is, but it is part of a whole body of furniture and environmental design that is consistent, at least, in its surreal eccentricity, for the same designer has also produced coat racks in the shape of giant gloves, ashtrays that resemble bloody palms and sunglasses that have the texture of brick walls.

He is Gaetano Pesce, born in La Spezia, Italy, in 1939. He studied at the School of Architecture and the Institute of Industrial Design, both in Venice. In 1959 he founded, with others, "Group N' " in Padova, an association of artists concerned with programmed art. For the last 20 years he has been particularly active in furniture design and interior design, finding time also for experiments in kinetic art, serial art, film making and audio-visual montages. In 1972, "Italy: The New Domestic Landscape," the exhibition at New York's Museum of Modern Art curated by Emilio Ambasz, included Pesce's "Archaeological Environment," a subterranean habitation imagined to have been built in the year 2000 A.D. and thus "belonging to the epoch known as 'The Period of the Great Contaminations.' " Other work by Pesce has been seen in London at the Victoria and Albert and in Paris at both the Musée des Arts Décoratifs and the Centre de Création Industrielle of Centre Pompidou.

4

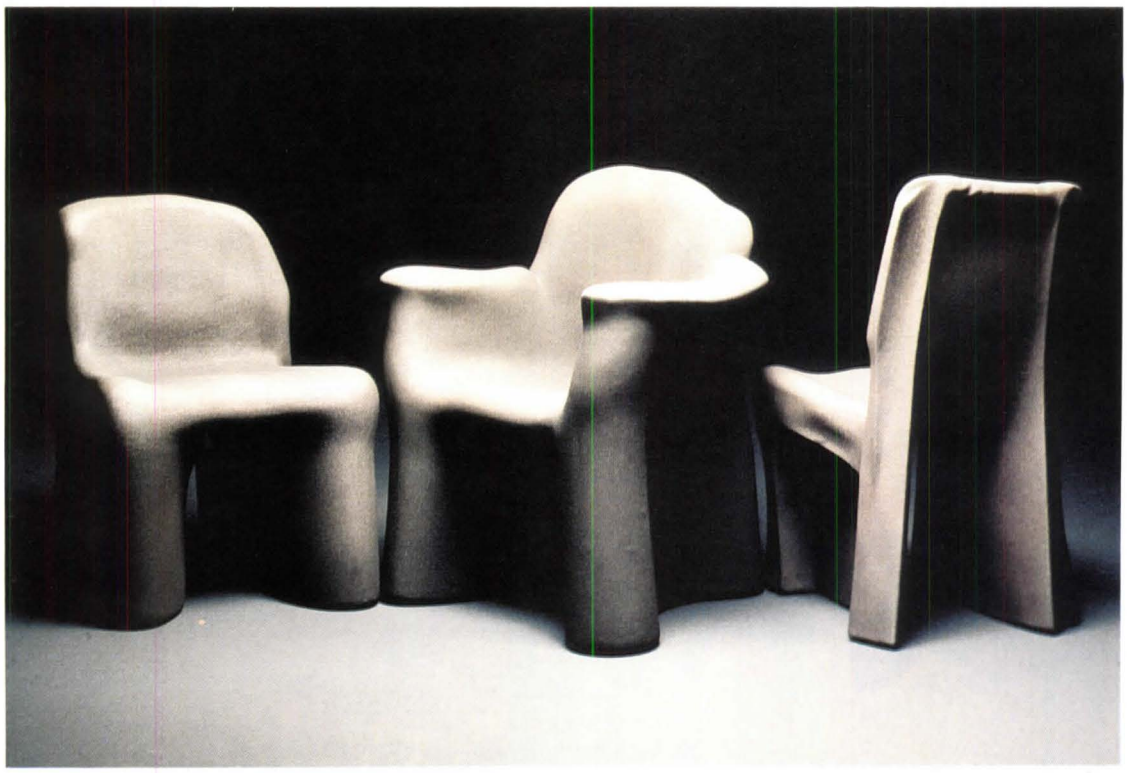
Bruno Falchi & Liderno Salvador

5

Pesce's Sit Down armchair and sofa (1 and 2), available here through a.i. (Atelier International), are of foam polyurethane padding injected into tufted Dacron over a plywood base. The exact shape varies from chair to chair. The Golgotha chair (3), in the collection of the Museum of Modern Art, New York, deceptively supple looking, is of fiberglass cloth and resin and manufactured by Bracciodiferro of Italy. Lamp designs include a greatly overscaled Luxo lamp (4) and a more anthropomorphic model (5). A complex tufted environment called Yeti (6) was designed by Pesce in 1968.

6

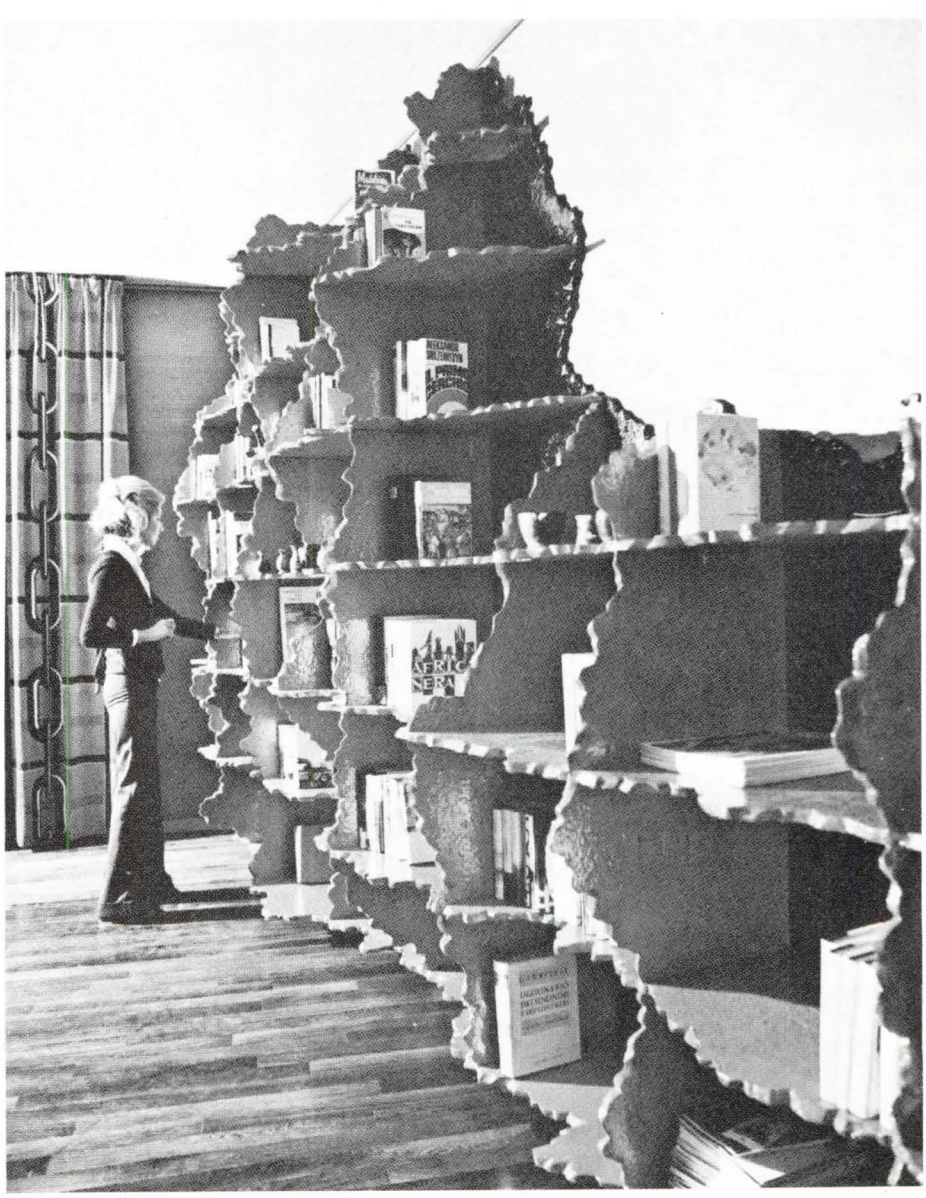
Alain Hardy



1

The Dalila chairs (1), molded of hard polyurethane with an epoxy finish, come in gray, black or brick red and in the three shapes shown. From left to right: Dalila Uno, Dalila Tre and Dalila Due, all from a.i. (Atelier International). The Carenza bookcase (2) is a custom design of lacquered wood from 1972.

The two-seat sofa (3) is called simply The Fist. Companion to the Dalila chairs and also available from a.i. is the Sansone table (4), cast in polyester resin. There are three versions—roughly square, roughly rectangular and roughly round.



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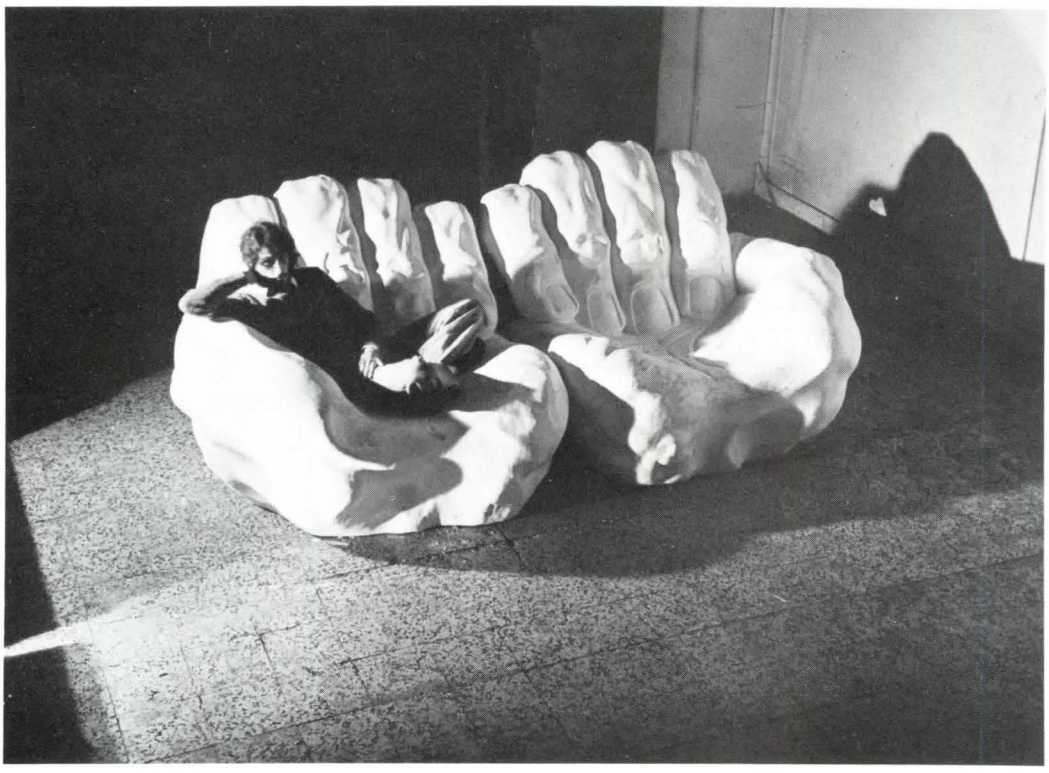

3

Several of Pesce's specific designs defy industrialization: In the "Sit Down" group of chairs, every chair produced has its own particular shape and configuration of tufts, not quite like any other chair. In the "Sansone" group of tables, the color combination never comes out just the same for any two tables. In other works, Pesce defies our expectations of materials: inflated surfaces that seem firm are, in fact, soft; chairs that appear to be made of flowing fabric are really solid. In still others, he reminds us of irrelevant, sometimes unpleasant, objects: We may not really *want* to grind out our cigarettes in the palm of a hand.

Yet these curiosities, these irrelevancies, even these occasional discomforts, have a purpose: at the very least, they make us see Pesce's objects with a fresh, surprised eye. As Pesce himself has written, "Insecurity, as a stimulus, is proving itself an indispensable part of behavior today: Security is only history's misfit." □

4

DEATHS

Fazlur R. Khan: A general partner of Skidmore, Owings & Merrill since 1970, Khan was an innovative leader in his field of structural engineering. In collaboration with Myron Goldsmith, FAIA, Bruce Graham, FAIA, and other SOM partners, Khan shaped the designs of some of the most remarkable and most admired buildings of recent years, among them the 95-story steel-braced John Hancock Center, Chicago; the 110-story "bundled tube" Sears Tower, Chicago; the elegant Kitt Peak solar telescope in Arizona, and the new Haj Terminal in Jeddah, Saudi Arabia. Khan was born in Dacca, Bangladesh, and received his bachelor of engineering degree from the University of Dacca. After coming to the United States, he received several advanced degrees at the University of Illinois, Champaign-Urbana, and joined the Chicago office of SOM in 1955.

In addition to his work with SOM, Khan taught in the architecture department of the Illinois Institute of Technology, wrote a number of scholarly papers, lectured widely and served as chairman of the International Council on Tall Buildings and Urban Habitat. He was a fellow of both the American Society of Civil Engineers and the American Concrete Institute and was named four times by *Engineering News Record* as construction man of the year. He was on a business trip to Korea and the Middle East when he suffered a fatal heart attack. He died March 27 at the age of 52.

Turpin Chambers Bannister, FAIA: Known widely as an architectural historian, Mr. Bannister's academic career spanned three decades, beginning with a nighttime teaching job at New Jersey Polytechnic Institute in 1931. It ended in 1965 after nine years as dean of the college of architecture and fine arts at the University of Florida when he suffered a stroke at the conclusion of a lecture to a class in architectural history. In between, he had taught at Rensselaer Polytechnic Institute ('32-44), was dean of architecture and fine arts at Auburn University ('44-48) and head of the University of Illinois architecture department ('48-54). He died March 15 in Williston, Fla., at the age of 77.

Mr. Bannister was a founder of the Society of Architectural Historians, serving as its president from 1940-42. He edited that organization's journal for a period, and also edited the *Journal of Architectural Education* in 1946-48, published by the Association of Collegiate Schools of Architecture, and AIA's *The Architect at Mid-Century*.

In 1955 he was the sixth person named to receive the Edward C. Kemper award, given for "significant contributions to the Institute and the profession."

Hervey Parke Clark, FAIA: A pioneer designer of contemporary houses in the Bay Area, beginning in 1934, Mr. Clark's projects included the World War II memorial overlooking the Golden Gate in the San Francisco Presidio, buildings at Stanford University and the University of California at Santa Barbara and the U.S. consulate in Fukuoka, Japan (with George Rockrise, FAIA). He taught design at Stanford's architectural school from 1954-70 and was president of the Northern California Chapter/AIA in the mid-'40s. He also served on various planning agencies in the Bay Area.

Mr. Clark graduated from Yale in 1921 and from the University of Pennsylvania architectural school in 1926; he received his early training in the New York City office of Hood, Godley & Fouilhoux. He moved to San Francisco in 1932 and practiced there until 1970. He died Jan. 31 in Woodside, Calif., at the age of 82.

William B. Bekemeyer, Memphis
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H. Louis Bodmer, San Diego

Michael Gene Bradley, Edmond, Okla.
S. C. Chamberlain Jr., Longmeadow, Mass.
William Day, Moline, Ill.
G. R. Doherty, Quincy, Mass.
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J. R. Kroeger, Sioux Falls, S.D.
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J. C. Standish, Mountain, Ark.
Milton Eugene Stokka, Fargo, N.D.
Horace Wachter, Toledo, Ohio
Harry Wilson Jr., FAIA, Los Angeles
Linda Reiko Yanagisawa, Honolulu, Hawaii

BRIEFS

Call for Entries.
The Prestressed Concrete Institute has set an Aug. 2 deadline for its 1982 awards program, open to all architects and engineers practicing professionally in the U.S., its possessions and Canada, and to interested government agencies. Any kind of structures using precast/prestressed concrete or architectural precast concrete may be entered. Robert M. Lawrence, FAIA, president of AIA, will chair the jury. Other jurors are John H. Wiedeman, Stanley Gordon, Bruce J. Graham, FAIA, and J. Douglas Miller. Contact PCI, 201 N. Wells St., Chicago, Ill. 60606.

New England Architecture Course.
The University of Vermont's Vacation College is offering a week-long learning and recreation program July 25-30 to study the origins of early town planning and New England architecture. A two and a half day field trip is scheduled as part of the course. For more information, contact Burt Sisco, University of Vermont, Continuing Education, 411 Main St., Burlington, Vt. 05401.

Call for Comments on Life Safety Design.
The AIA life safety design task force, chaired by George Notter Jr., FAIA, is developing an AIA policy and would appreciate members' comments and suggestions about architects' roles and responsibilities. Direct all correspondence to Henry Lawrence at Institute headquarters.

International Design Competition.
OLS Property Development Co. Ltd. of Hong Kong, with sponsorship by Union of International Architects and HKIA-Hong Kong, is organized an architectural competition for the design of a residential complex of 43 units and a private club to be located on the slopes overlooking Victoria, Hong Kong. The jury will include Richard Meier, FAIA; Arata Isozaki of Japan and John Andrews of Australia. Competition documents are available at each UIA national section or directly from Jon A. Prescott, Office of the Professional Advisor, 2-4 Sun Ning Road, 5th Floor, Causeway Bay, Hong Kong.

PRODUCTS

Wallcoverings.
A thin aluminum layer coated with an IR transparent dye produces a thermo-reflection concept for a decorative insulation. Wallcovering is washable, strippable and requires no special installation process. (Enertec Systems, Inc., Barrington, Ill. Circle 193 on information card.)

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Hexagonal glass showcase features a silver or bronze mirror finished base, lighted interior, doors that lock and invisible hinges. It is suitable for commercial and residential use. (MagicGlass, San Francisco. Circle 191 on information card.)

Fluorescent Track Lighting.
Three-inch-diameter aluminum tubes with anodized or enamel finishes house either a single circuit track or a series of fluorescent lamps. Lamps can be rotated 350 degrees and locked in any position. (Staff Lighting, Highland, N.Y. Circle 188 on information card.)

Concrete Mineral Paints.
Inorganic mineral paints are designed to be water-vapor permeable, water repellent, alkali and carbon dioxide resistant. Silicate based paints are available in colors or translucent glazes. (King Mineral Coating Systems, Garden City, N.Y. Circle 179 on information card.)

Water Repellent Treatment.
Stormproof, a clear liquid that impregnates paper, provides weather and water protection and mildew resistance for paper blueprints, drawings and maps. It is designed to produce no change in the texture, weight and flexibility of the treated paper. (Martensen Co., Inc., Williamsburg, Va. Circle 178 on information card.)

Analog Clock.
Hours are indicated by hands printed on a horizontal band that moves downward, and minutes are shown by a vertical band that moves left to right on a rectangular face. Units can be suspended, built into a wall or freestanding, with a choice of sizes, proportions, colors and graphics. (Intec Project Engineering, Ltd. Worcester, England. Circle 177 on information card.) □

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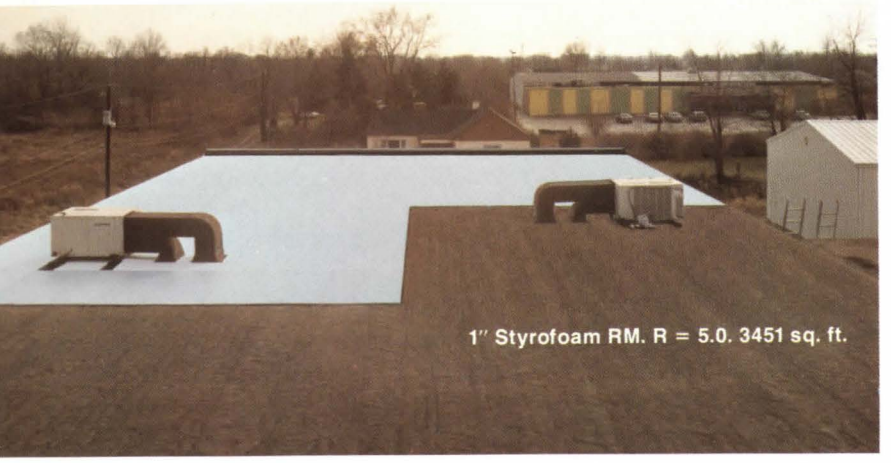

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