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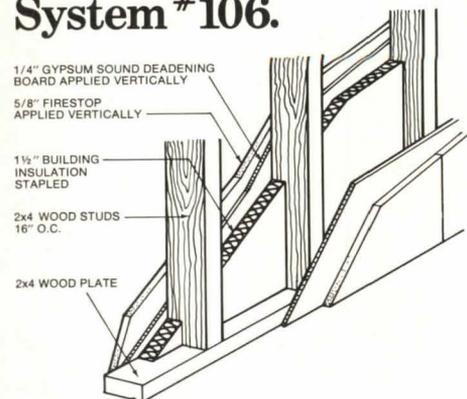
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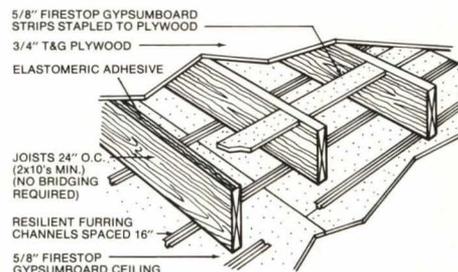
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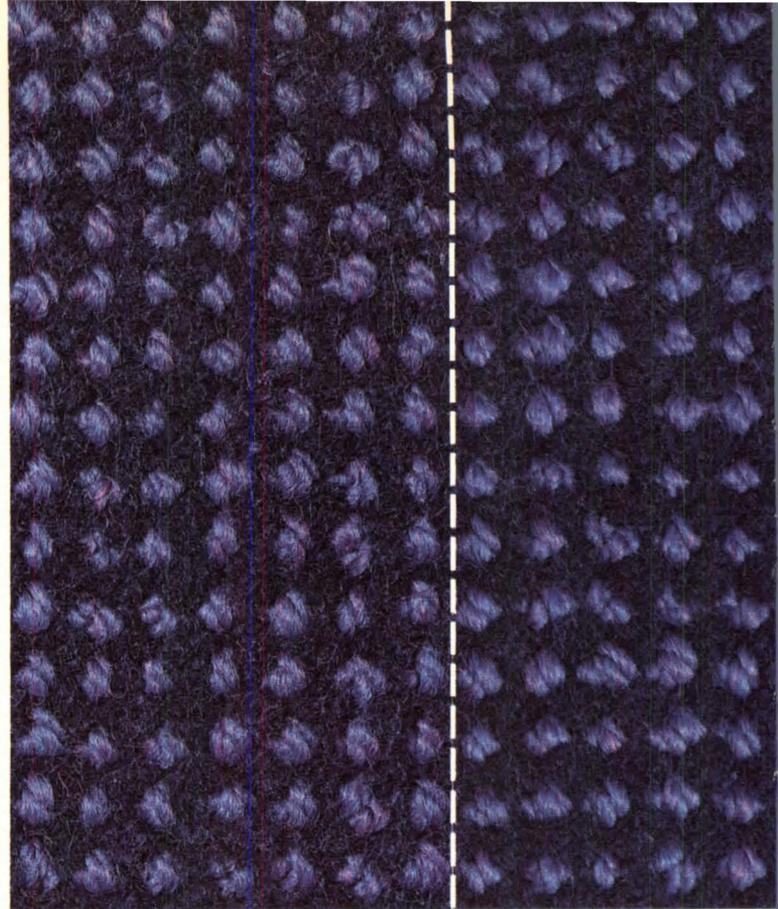
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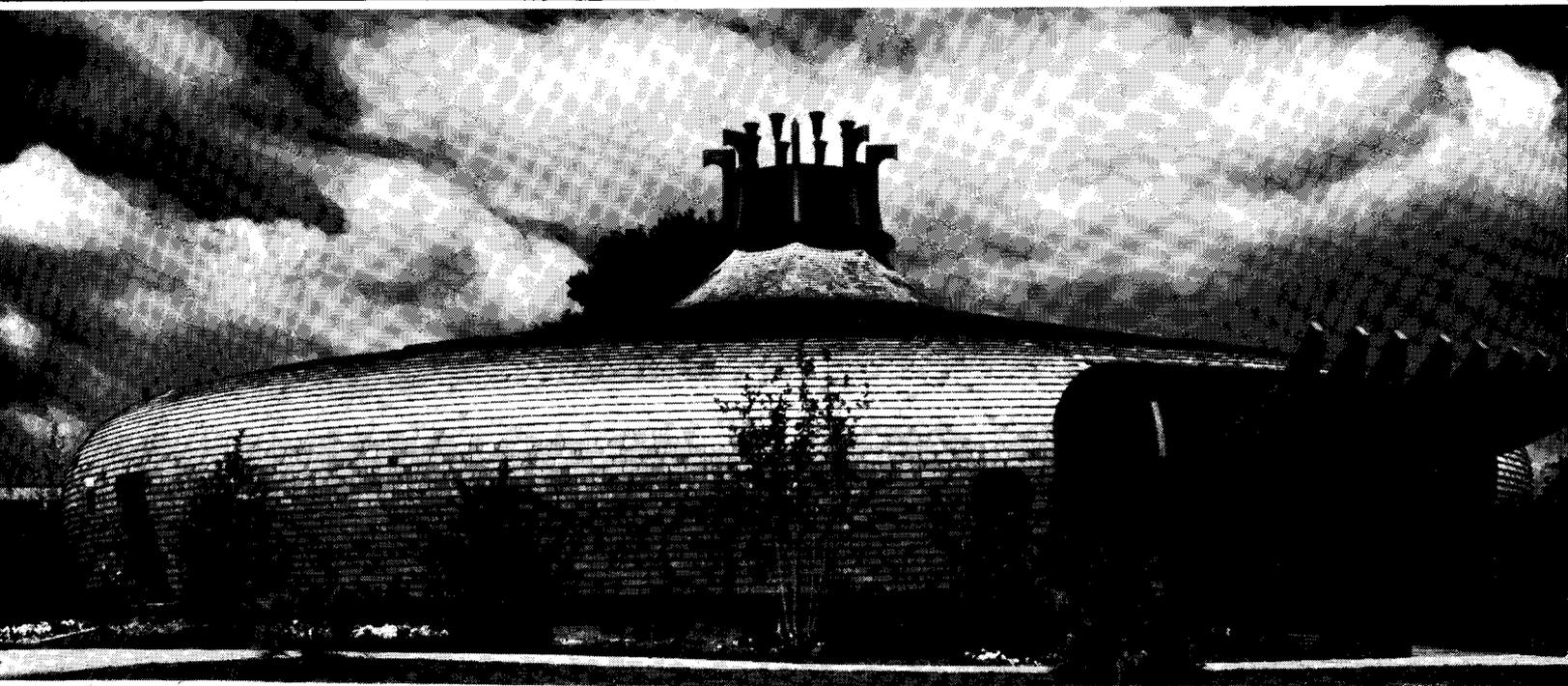
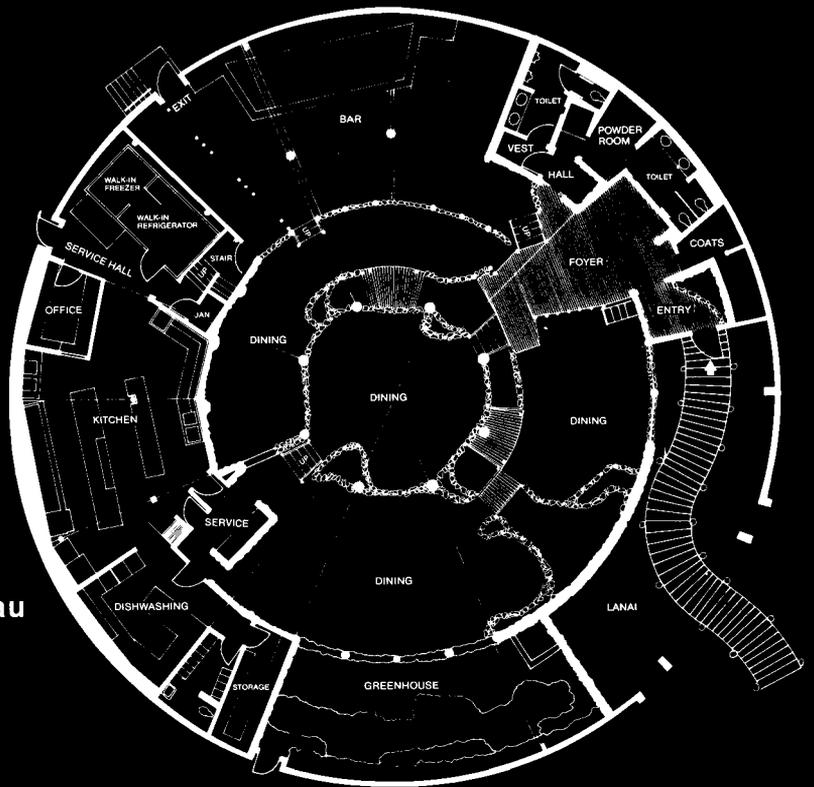
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Cover: Top, a Montana landscape; bottom, the aftermath of strip-mining in Appalachia.

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Survey Measures Use Of Design-Construct Contracts by Industry

Hard data about the extent to which design-construct firms have penetrated the industrial and commercial building market and the factors that influence corporations in choosing between design-construct and separate contracts are a rare commodity. A recent survey of 383 construction projects valued at \$5 million or more, conducted by *Fortune* magazine's market research department, makes available new and sometimes intriguing facts.

Titled, *Corporate Practices and Attitudes Toward Industrial/Commercial Construction*, the survey reports that the type of facility is important in management's decision to select a design-construct or separate contract. More than a quarter (28 percent) of the projects surveyed involved a single contract with a design-construct firm.

Only 15 percent of all nonmanufacturing facilities, such as banks and corporate headquarters, were done by design-construct firms, but the portion soared to 49 percent of primarily engineering projects, including mining, offshore and ore-petroleum process.

For all types of contracts, the main criteria for choosing a particular firm are "their experience with this type of construction" and "satisfactory previous work for us." For separate contracts, the most important factors in selecting architects only for a job (instead of an architect and engineer or a single design-construct firm) were "excellence of their design capabilities" (51 percent); "depth of their organization" (34 percent); "involvement of their top management with our project" (31 percent). Architects were chosen for "reputation for reliable cost/time estimating" only 11 percent of the time, while single contracts were chosen for this reason 51 percent of the time. Architects were selected just 6 percent of the time for "excellence of their sales presentations."

Corporate involvement in energy, chemical and other manufacturing projects was apparently left primarily to middle-level

managers and professionals, while two-thirds of the time top management tended to be involved in the construction of non-manufacturing facilities. Architects formed only 3 percent of the management force involved in the projects surveyed.

Fixed price contracts were used with 45 percent of the prime construction contracts on projects where specialized contracts were signed, and on 38 percent of the single, design-construct contracts. Single contracts were slightly more likely to have cost-plus or guaranteed-maximum features. Only 9 percent of prime construction contracts and 5 percent of design-construct contracts had incentive or profit-sharing stipulations.

Single copies of the survey are available for \$5.75 from *Fortune*, Room 1834B, Time & Life Building, Rockefeller Center, New York, N.Y. 10020.



Giant outdoor sculpture has little meaning for the blind. So after erection of Alexander Calder's bright red, 53-foot "Flamingo" at Chicago's federal center, the General Services Administration commissioned a miniature version of the work that the blind can "see through touch." The miniature (above) was unveiled last month at a Washington, D.C., museum but eventually will stand next to the original, along with an explanatory braille pedestal.

Florida Businessman, Connecticut Mayor Named to GSA Posts

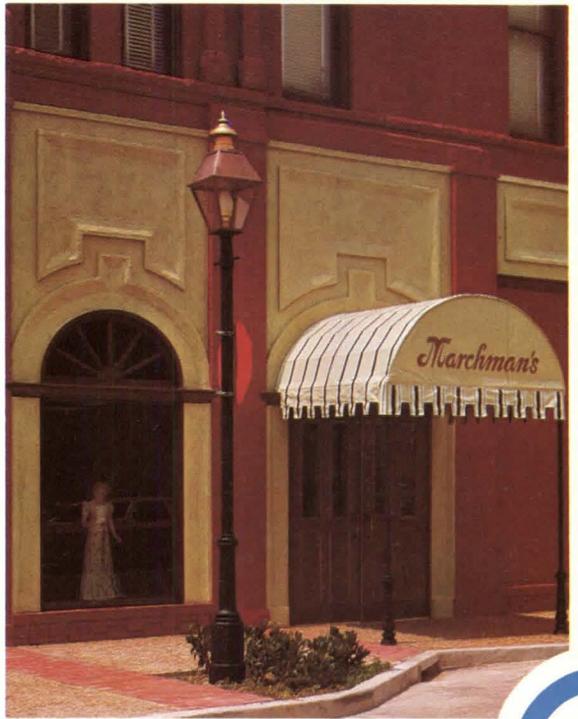
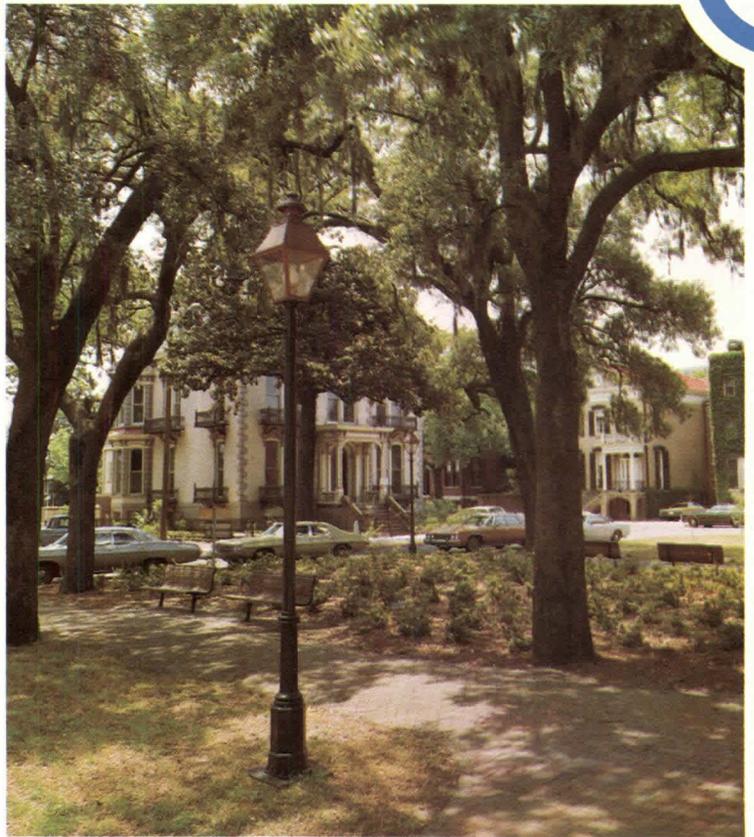
Jack M. Eckerd, head of the Jack M. Eckerd Corp. in Clearwater, Fla., which manages a chain of drugstores and other business ventures, has been nominated by President Ford to become administrator of the General Services Administration. He would replace Arthur F. Sampson, who resigned the post recently. Eckerd, who is 62 years old, lost the 1974 Florida race for the U.S. Senate and was also unsuccessful in seeking the 1970 GOP gubernatorial nomination. His nomination as head of GSA requires Senate confirmation.

In September, President Ford appointed Nicholas Panuzio, mayor of Bridgeport, Conn., and formerly associated with the University of Bridgeport, as commissioner of the Public Buildings Service. He succeeded Larry F. Roush, who resigned last February. Walter A. Meissen, AIA, was acting administrator until the Panuzio appointment. Meissen is now assistant commissioner for construction management at PBS.

Bill Seeks 'Life-Cycle Energy Cost' Analysis

A bill that would require that federally owned and assisted buildings use "the best practicable measures for the conservation of energy and the use of solar energy systems" has been introduced in the House as the Conservation and Solar Energy-Federal Buildings Act of 1975 (HR 8711). The bill states that the "cost of energy consumed over the life of the facilities must be considered in any analysis of their energy use, in addition to the initial cost of constructing the facilities." Such analysis shall "include a detailed analysis of the life energy costs of the building" and a separate analysis of the building's total energy requirements.

John P. Eberhard, AIA, president of the AIA Research Corporation, testified for the Institute on Oct. 29 before the subcommittee on public building and grounds.



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He said that AIA approves the bill's general philosophy and supports the concept of life-cycle costing in the evaluation of energy design alternatives. He cautioned, however, that the bill is too specific with regard to the "methodology of analysis and life-cycle cost calculations," and would be difficult to legislate with terms defined in such detail.

The bill calls for long-term comparative costs of systems being evaluated in annual and projected costs of all energy utilities. This seems a logical step to include in life-cycle cost analysis, Eberhard said, but there is no general agreement on such projections. Unless an executive decision on guidelines to be used in such projections is made, Eberhard said, "such analysis will be impossible to do on a comparative basis."

The bill also calls for consideration of the amount of energy required to produce and transport materials used in construction. Eberhard said that "we do not have even rough approximations for making such an analysis." The proposed legislation would require new techniques for energy supply, generation and transmission. Eberhard said that "hundreds of new techniques and concepts will emerge"—and many already have. "How would the energy use analyst know when to stop considering additional alternatives and get on with a workable solution?" he asked. On the requirement for an estimate on future costs of depletable resources, Eberhard asked how an analyst could hope "to include such estimates on the future cost of natural gas, for example, when legislation with respect to deregulation would seriously affect the nation?" In spite of such cautions, he reiterated AIA's support of the bill's intent.

Adaptive Use of Old Courthouses Studied

County courthouses, often sited on the highest hill or in some other prominent location, remain centers of activity and visible symbols of the high value we place on justice and civic responsibility. However, numerous courthouses are now threatened with demolition as deferred maintenance problems result in serious code violations and as basic governmental services provided by county courts explode and stretch the capacity of courthouses to the breaking point.

The Historic Courthouse Project, a cooperative effort involving the National Endowment for the Arts, the National Trust for Historic Preservation, the University of Illinois Chicago Circle campus and Harry Weese & Associates, is a first attempt "to find broadly applicable answers to a widespread problem: making the grand, impractical and extravagant courthouse of another era suitable for the

vastly changed conditions of modern life."

After surveying over 1,000 counties in 13 Midwestern states, the project selected nine courthouses, with typical problems, the solution for which could have widespread applications. Each courthouse was assigned to teams of fourth- and fifth-year architectural students from UICC who were supervised by professional advisers. Team visits to the selected courthouses involved interviews with county officials, on-site photography and other data-gathering, as well as meetings with local historical societies, interested individuals and the media.

After sorting and weighing a wealth of data, the students developed preservation action strategies. In evaluating the buildings, they followed the rule of thumb that says: "Do not intervene beyond what program and common sense require."

All nine buildings were found to be structurally sound. Three different methods were used to accommodate modern county functions in older buildings: total reorganization of existing space, addition of mezzanine decks between floors and creation of an additional downtown facility or "campus."

A summary publication of the project results will be available at a national conference on courthouse preservation to be held early in 1976.

Series of Hearings Scheduled on Codes

The Building Officials and Code Administrators International will hold three separate public hearings on proposed changes to its 1975 *Basic Codes* series. This is an expansion in the organization's previous procedure when only one public hearing was held for a given year's change proposals.

The aim, says Richard L. Sanderson, BOCA's executive director, is to "foster greater input and participation." The hearings "are in keeping with BOCA's democratic model code revision procedure" and "any interested person may submit proposals for changing code provisions."

Testimony will be taken on changes proposed to the *Basic Building Code/1975* only on Nov. 22 at the John Marshall Hotel, Richmond, Va., and on Nov. 29 at the Hilton Inn, Lansing, Mich. On Dec. 3-4, testimony will be taken on changes proposed to all 1975 *Basic Codes* (building, plumbing, mechanical, fire prevention, housing/property maintenance and industrial dwelling codes) at the Continuing Education Center, University of Chicago.

Following the public hearings, change proposals will be considered by appropriate BOCA committees, with final action taken by vote of BOCA members at the

annual conference next June. Changes approved by the membership will be published in 1976 accumulative supplements to the codes.

Cities Shortchanged On Recreation Aid

A preponderance of federal funds expended for the development of recreational facilities has gone to suburban and rural areas rather than to cities. So says John M. Burdick in a report titled "Recreation in the Cities: Who Gains from Federal Aid?" Prepared for the Center for Growth Alternatives, the report by Burdick is an investigation of the Interior Department's land and water conservation fund which over a 10-year period has provided nearly \$1.1 billion to states through a matching grants program. The program is administered by Interior's Bureau of Outdoor Recreation (BOR) which, in 1963, was given responsibility by Congress to produce a comprehensive outdoor recreation plan within five years.

Over the life span of the fund, \$5.48 has been expended for every American citizen. But financially hard pressed cities have not been able to put up the 50 percent matching funds. For example, New York City has received \$1.74 per capita; Chicago, 76 cents; Detroit, 30 cents; Houston, 42 cents; Cleveland, 16 cents. Many city governments, says Burdick, "have neglected the recreational needs of their citizens, often favoring destructive highway projects, for example, at the expense of critical open space." Also, Burdick reports, the national distribution formula does not favor urban states. For example, New York State received \$3.79 per person while Wyoming received \$29.50 per capita.

Most of the states used the moneys for state park development rather than for open space acquisition, which is contrary to the expectations of Congressional sponsors of the fund. And Burdick points out that "federal and state recreation planners have, for the most part, skirted inner city needs in setting spending priorities." He is critical of recreation planning processes because of the lack of public participation. "A more open process would be more in tune with democratic values of citizen involvement and could lead to more equitable distribution of benefits."

The report considers alternative proposals, including "augmentation to \$600 million a year for grants to states, adjustment of the distribution formula to end favoritism to low-population states, an increase of federal cost-sharing to 90 percent for blighted areas and expansion of the fund's uses to include park operation and maintenance and grants for construction of indoor facilities." Burdick also pro-

continued on page 12

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(C) an enclosure wall (D) a sound control wall
(E) a fire control wall?



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Going On from page 8

poses a new high-level commission or task force which would recommend specific actions to end the neglect of the inner city.

The report may be obtained for \$2 from the Center for Growth Alternatives, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036.

Prestressed Concrete Awards Announced

Twelve winners in the 1975 Prestressed Concrete Institute awards program have been selected by a jury of architects and engineers for their "excellence in architectural and engineering design using precast and prestressed concrete."

The winners:

- Edwin J. Thomas Performing Arts Hall, Akron University, Ohio (architects: Caudill Rowlett Scott; Dalton, van Dijk, Johnson & Partners).
- Colony Square, Phase II, Atlanta (architects: Jova/Daniels/Busby, Inc.)
- Richland Branch, First Federal Savings & Loan, Richland, Wash. (architects: Waldron & Pomeroy).
- Clinker Storage Silo, Canfarge Cement Co., St. Constant, Quebec.
- Rhode Island Ave. Station Canopy, Washington, D.C. (architectural and structural concept development: Harry Weese & Associates Ltd.; De Leuw Cather & Co.).
- United Nations International School, New York, N.Y. (architects: Harrison & Abramovitz & Harris).
- Mountain View Parking Garages, Knoxville, Tenn. (associated architects: McCarthy Bullock Holsaple, Inc.; Francis F. Painter, AIA; Weeks & Ambrose).
- Treated Water Storage Reservoirs, Arvade, Colo.
- Hirshhorn Museum and Sculpture Garden, Washington, D.C. (architects: Skidmore, Owings & Merrill).
- Pine Valley Creek Bridge, San Diego, Calif. (architects: California Department of Transportation, Division of Structures).
- Elwha River Bridge, Clallam County, Wash. (architects: Washington State Department of Highways, Bridge and Structures Division).
- Donald Road Overcrossing, Donald, Ore. (architects: Oregon State Highway Division, Bridge Section).

Chairman of the jury was William Marshall Jr., FAIA, president of the Institute.

AIA Staff Opening

AIA has a job opening in the department of government affairs for an assistant director of federal agency liaison programs. Responsibilities include working at both policy and technical levels on governmental matters of concern to the design profession. The assistant director

will monitor programs, policies and procedures of federal agencies and, specifically review the *Commerce Business Daily* and the *Federal Register*.

Also, the assistant director will assist in the work of five AIA committees. A background knowledge of architecture is required and related professional experience, particularly with federal agencies.

Interested persons may send a résumé, with salary requirements, to Bruce Schafer, AIA Headquarters, 1735 New York Ave. N.W., Washington, D.C. 20006, (202) 785-7382.

Thirteen Awards Given Steel Framed Buildings

The 16th annual competition for steel framed buildings, sponsored by the American Institute of Steel Construction has named 13 winners.

The jury was composed of Max Abramovitz, FAIA; Fred Bassetti, FAIA; Charles William Brubaker, FAIA; Milo S. Ketchum, FASCE, and Harlan E. McClure, FAIA. In commenting on this year's competition, the jurors observed that buildings are increasingly expressing the material with which they are framed.

The winners were:

- Fodrea Community School, Columbus, Ind. (architect: Caudill Rowlett Scott; associate architect: A. Dean Taylor, AIA).
- Ivan G. Smith Elementary School, Danvers, Mass. (architect: Caudill Rowlett Scott).

The Employment Exchange

As announced, the JOURNAL will publish employment notices for AIA members and firms without charge for the duration of the profession's economic crisis. The ground rules: 1) Only one notice will be published for any individual member or firm in any given issue; each notice will be limited to 24 words; 2) copy will be received between the 1st and 15th of each month for publication in the following month's issue; 3) notice will be published on a first-come, first served.

Positions Available

Program coordinator through 6/76, non-profit community design center; duties: community relations, fund-raising, program development; \$700 per mo. Design Cooperative, 1425 Center St., Little Rock, Ark. 72202, 501/376-9117.

Positions Wanted

Architect, NCARB, licensed many states, 25 yrs. experience, design, construction, management, private practice. Consider responsible position in A/E firm, industry, government, institution. Nathan Nadler,

- Coatings & Research Division, Hampton Research Center, Hampton Township, Pa. (architect: Giffels Assoc., Inc.).
- Leckenby Co. Office Building, Harbor Island, Seattle (architect: Ibsen Nelsen & Associates).
- Crosby Kemper Memorial Arena, Kansas City, Mo. (architect: C. F. Murphy Associates).
- North Carolina Blue Cross and Blue Shield Headquarters, Chapel Hill, N.C. (architect: Odell Associates, Inc.).
- Microwave Tower for Plymouth Radio Building, Plymouth, Minn. (architect: Setter, Leach & Lindstrom, Inc.).
- Baxter Corporate Headquarters-Central Facilities Building, Deerfield, Ill. (architect: Skidmore, Owings & Merrill).
- First Wisconsin Center, Milwaukee (architect: Skidmore, Owings & Merrill).
- Fourth Financial Center, Wichita, Kan. (architect: Skidmore, Owings & Merrill).
- Sears Tower, Chicago (architect: Skidmore, Owings & Merrill).
- Westinghouse Research and Development Center: Administration Building, Churchill Borough, Pa. (architect: Skidmore, Owings & Merrill).
- Visitors Information Center, Trojan Nuclear Power Plant, Rainier, Ore. (architects: Wolff Zimmer Gunsul Frasca; Pietro Belluschi, consultant).

Errata

There were several errors and omissions in credits for projects included in the August issue on "urban accomplishments,"

716 N. Halifax Ave., Apt. 6, Daytona Beach, Fla. 32018.

Architect, NCARB, 16 yrs. experience; B. Arch MIT; generalist, private practice 5 yrs.; relocating for career opportunity. R. S. Blaho, AIA, Rte. 116, Purdy Station, N.Y. 10578, 914/227-4605.

Architect, Mich. and Ind. registrations; 32 yr.-old responsible family man; will consider any position offered. W. W. Cameron, AIA, 1217 Rynearson Road, Buchanan, Mich. 49107, 616/695-9942.

Planner, architect, energy adviser wants association with Eastern org. or project; active in AIA, AIP and related prof. groups. Name withheld on request. 401/783-2381.

Architect, NCARB, single, 22 yrs. diversified experience, energetic, responsible, strong in production and project coordination. NYC area or overseas. Orest Prypkan, AIA, 60-67 Palmetto St., Ridgewood, N.Y. 11227, 212/366-4892.

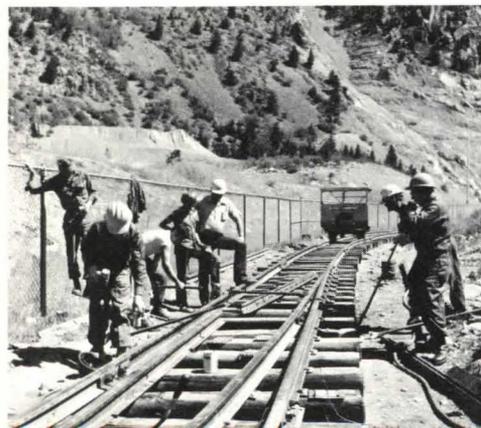
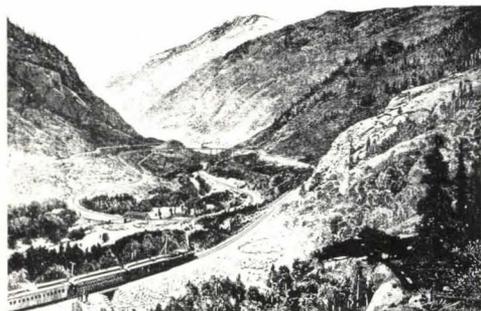
for which our apologies to all concerned.

To set the record straight: Hardy Holzman Pfeiffer Associates of New York were designers of Orchestra Hall in Minneapolis (p. 34, 35); Woollen Associates of Indianapolis were architects of the colorful neighborhood center in the Over-the-Rhine area of Cincinnati (p. 28, 29); Urban Design Associates of Pittsburgh were designers of the Queensgate II Town Center in Cincinnati (p. 31); and the full name of the architectural firm which designed Kalamazoo Center (p. 22, 23) is the ELS Design Group, Barry Elbasani, Donn Logan, Michael Severin, Geoffrey Freeman.—Ed.

Seabees Rebuilding Mountain Railroad

The Seabees, the U.S. Navy's construction force, are rebuilding a historic railroad in Colorado's Rocky Mountains.

The project, part of the Georgetown Loop Historic Mining Area, involves the reconstruction of a four-and-one-half-mile narrow-gauge railroad from Georgetown to Silver Plume by members of the 15th Mobile Construction Battalion, Reserve. Completed in 1884 and abandoned 55



years later, it is to be reopened in 1977 as a tourist attraction for the Colorado State Historical Society.

The railroad is known as the Georgetown Loop because of its main physical element—a 400-foot-long steel trestle that carries the track over another section of track 90 feet below, thus creating a large loop. This high bridge, as well as three other standard bridges along the route, was necessary if the railroad was to be able to get to Silver Plume.

Silver Plume is only one and one-half

air miles from Georgetown, but it is 640 feet higher up in the mountains. A straight route would require a grade in excess of 9 percent—a railroading impossibility. The roadbed was constructed in a series of curves, lengthening the route to four and one-half miles, but reducing the grade to a manageable 3 percent. It was built to carry silver ore from local mines and later was used also for tourists until it ceased operations in 1939.

Colorado began thinking about building an interpretive center for the state's historic mining industry in the 1950s and, after a statewide survey, the Georgetown-Silver Plume area was selected because of its easy access and historical character. A lack of funding, however, prevented any work on the project for nearly two decades.

Highway access to the Rocky Mountain skiing areas nearly killed the project before it became a reality. In the early 1960s, planners laid out Interstate Highway 70—a major East-West route—right through the middle of the historic mining area up the Clear Creek Valley. A number of people objected and the route was altered to take the highway along the mountainside rather than through the valley. Excess fill from the construction was used to build a scenic overlook at the site of the high bridge.

Plans for the railroad began to develop in earnest in the early 1970s and by 1973 a contract had been signed with the Colorado Central Narrow Gauge Railroad to assist in the construction and to operate the railroad as a concession. At the same

continued on page 60

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Come to think of it, it's a good thing Parker Lever Handles weren't around in 1174 when the Tower of Pisa was started. We probably would have had a very leveling influence.

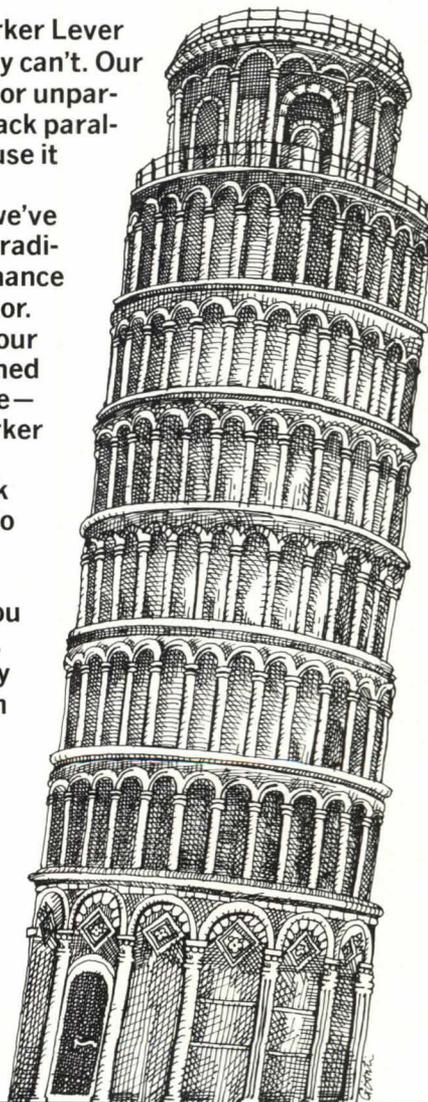
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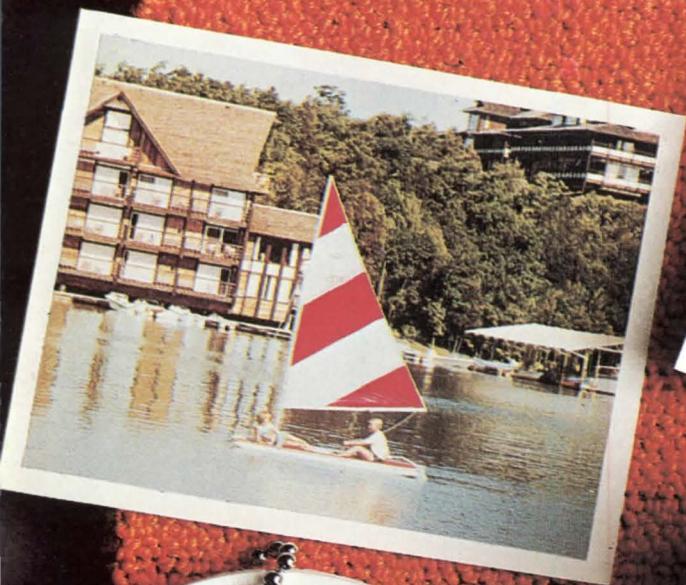
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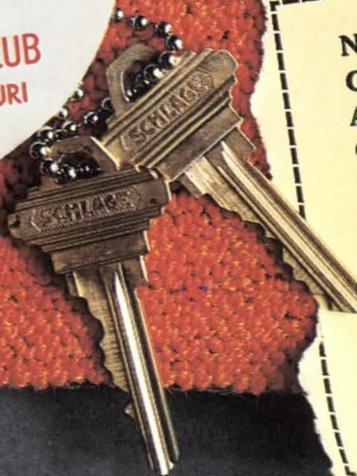


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AIA JOURNAL

If there has ever been a need for large-scale regional planning one exists in the Western mountain states. And the need is immediate.

It has been generated, of course, by the hell-for-leather push for national energy self-sufficiency and the consequent desire to get the enormous reserves of coal and other energy-related minerals that lie under these states out of the ground and into use. Crises tend to be enemies of planning, encouraging hasty action and single-purpose thinking, and the energy crisis is proving no exception. In the case of the mountain states, the benefits of exploiting their resources planlessly and single-mindedly would be fleeting. Vast as they are, these resources are not reusable and could be consumed quickly by our voracious national energy appetites, particularly if national energy policy continues to concentrate more on resource development than the less politically palatable changes in our ways and habits

that would be involved in serious energy conservation.

The costs of haste and heedlessness, however, would be permanent and especially poignant in this spectacularly beautiful and uniquely flavorful part of the country, last remnant of a spaciousness and way of life that has had a profound effect on our national character.

The most obvious and immediate of these costs would be the scarring of the landscape itself through strip-mining, followed by the sooting of the "big sky" of Montana and its neighbors as energy generation and other industrial plants proliferate.

A less visible but no less real price would be a drastic lessening of the agricultural productivity of the region, as both land and water are turned to energy-related uses. And a final price of nonplanning would be social and economic disruption of the region through too-rapid development and industrialization followed, all too probably, by equally rapid decline when the coal was gone.

Having said these things, are there alternative courses that could avoid or lessen these costs and still permit progress toward the unarguably desirable goal of self-sufficiency? The search for such alternatives must begin with questions of broad national energy policy.

One question, implied above, is whether we are over-emphasizing resource development while paying little more than lip service to conservation. AIA spokesmen have been virtually commuting to Capitol Hill this year in an effort to convince Congress of the huge opportunities for conservation in the area of buildings alone.

Continental Oil Company has estimated that a 10 percent saving in use of energy for transportation would equal the output

of 730 new coal mines, nearly 50,000 oil wells or 52 nuclear plants. A 10 percent saving in energy use by business and industry, the company estimates, would be the equivalent of 2.5 million barrels of oil per day, more than current imports from the Middle East.

A second question is whether we should deplete large stores of nonrenewable resources to achieve a kind of instant energy self-sufficiency or use them in a measured way while exploring new technology that would allow us to better exploit such inexhaustible assets as the sun and wind.

If these questions seem loaded, so are the dice in terms of decision making about national energy policy. There are immensely powerful industrial interests who stand to benefit from an all-out resource development push, and their voices often seem to be dominating the discussion in the places where policy is made.

This being as true regionally as it is nationally, it seems highly unlikely—like it or not—that the coal deposits of the mountain states will go unstripped. Montana estimates its coal reserves at 43 billion tons, lying under approximately a million acres of land. Half of this land already had been leased for coal mining by last fall, the state estimated, and the mining men have been assiduously roaming the remainder ever since, convincing ranchers and farmers to permit the stripping of their coal-rich acreage.

This land is part of the great Fort Union coal formation, which stretches from Saskatchewan to Colorado. Atop this formation, three states alone—Montana, Wyoming and North Dakota—sit on 1.3 trillion tons of coal, 40 percent of America's known reserves and 20 percent of the world's.

It is here, as Haynes Johnson wrote in

the *Washington Post* last summer, that "the great coal rush of the '70s" is underway, "on a scale that the West, for all of its history of exploration and exploitation, has never experienced."

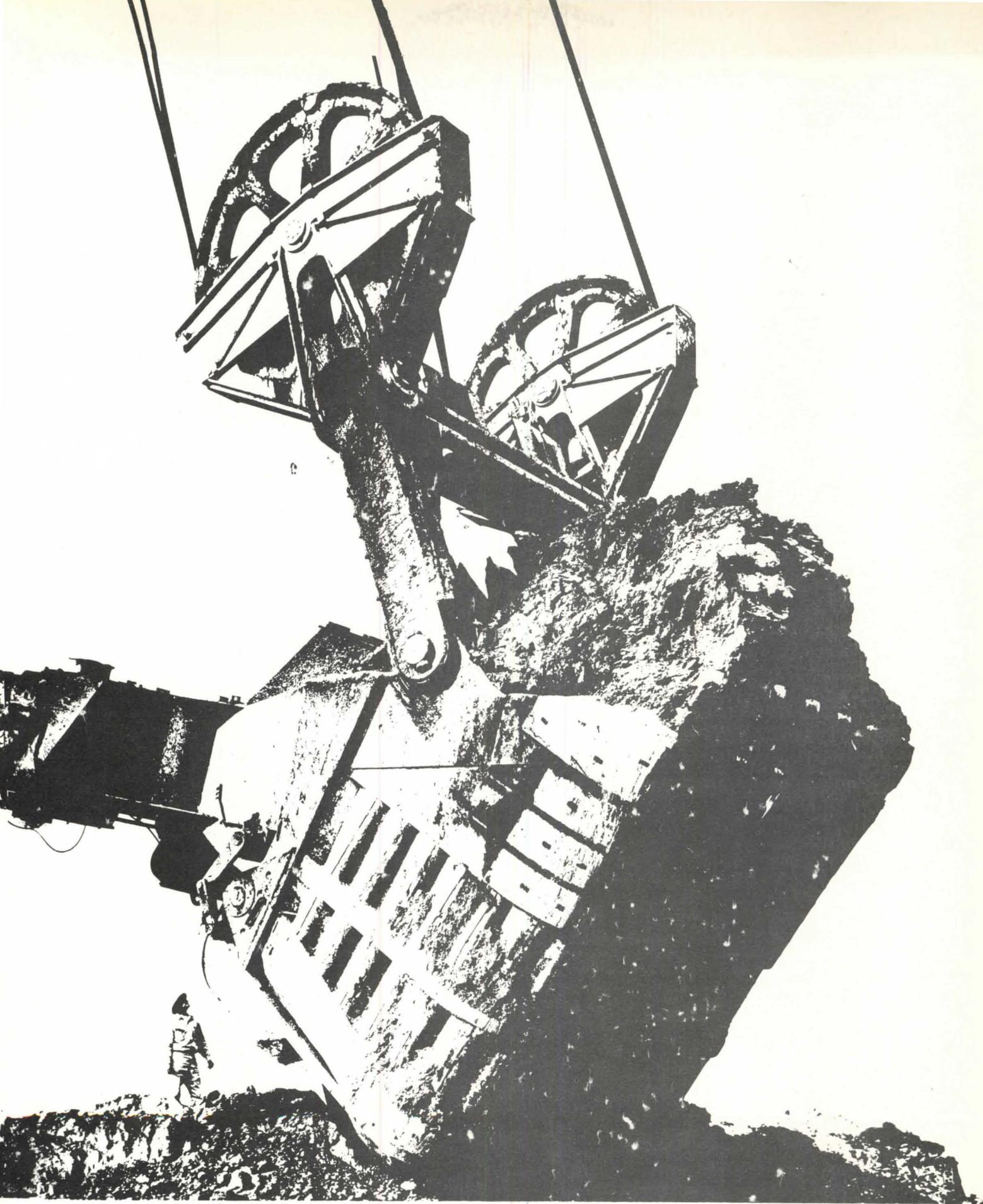
If the nation is asking this region to pay the costs of the "coal rush" for the sake of energy independence, then the least it can do is see that these costs are minimized and that growth and change occur in a way that will yield some permanent benefits and not just a disruptive cycle of boom and bust.

The means of doing so could be a federal-state regional planning and development authority to guide the pace and direction of both resource development and the economic and population growth that it engenders. The authority also should be charged with protection of the region's precious and unique natural environment.

The need for a regional approach stems from the commonality of the problems that the mountain states face and from the truism that in union there is strength. These states are as small in population as they are large in area. They are only likely to successfully assert the public interest in the face of powerful private developmental pressures if they band together—and if they all are joined by a strong federal presence.

The model that first comes to mind for the kind of instrument advocated here is, of course, the Tennessee Valley Authority. But it does not really serve, except as a demonstration of four decades' duration of the value of regionalism. TVA is purely a federal creature, and is more an operational than a planning agency.

A better structural model is the Delaware River Basin Commission, created in 1961 by four states and the federal government. The commission has drafted a comprehensive plan to which any public



or private actions "substantially" affecting the basin's water resources must conform.

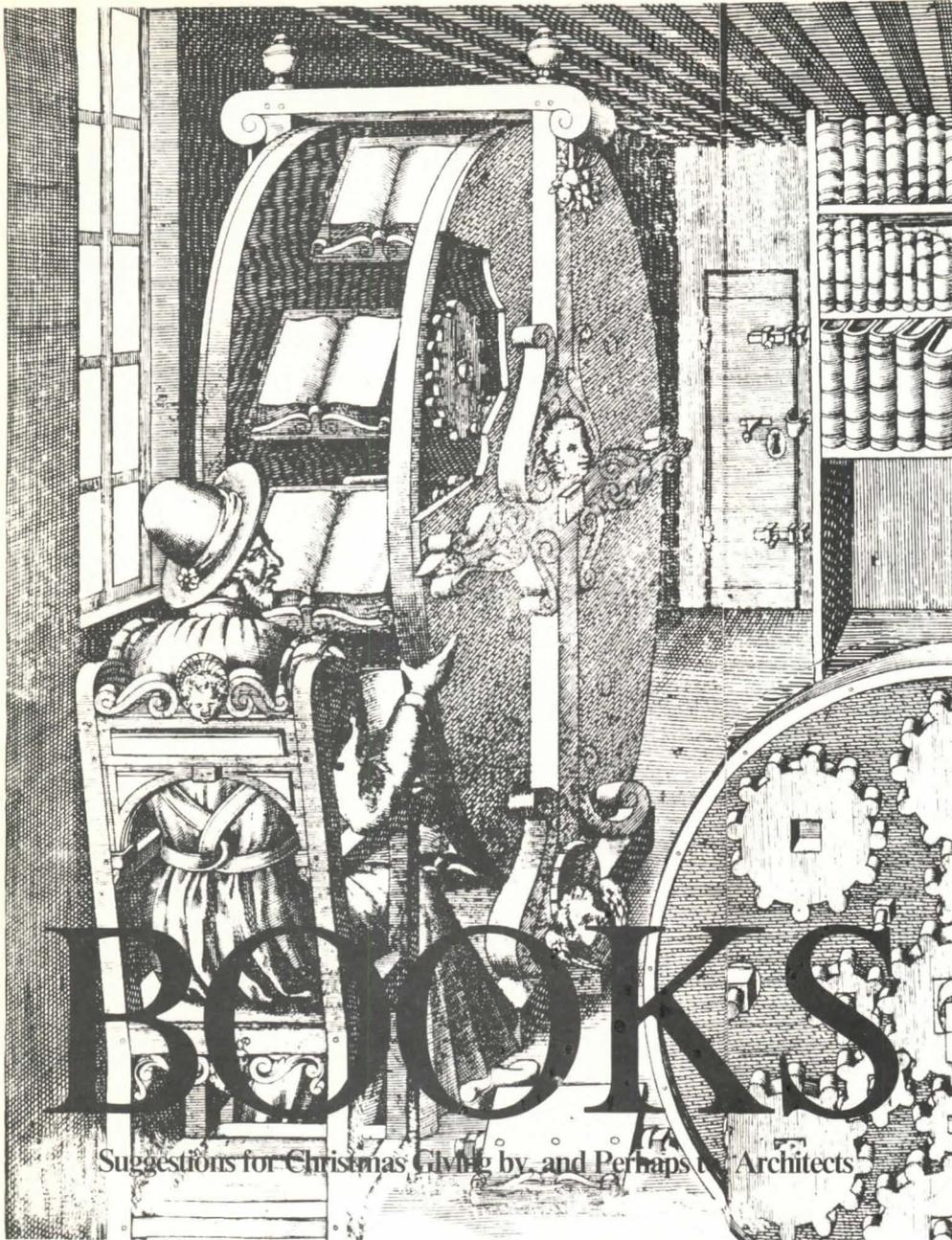
Among the advantages of such an approach are inclusion of the states as full participants, something that the proud, independent, and often Washington-shy citizens of the mountain states would be likely to insist upon, and the institutionalizing of a more comprehensive federal

concern than that exhibited by individual line agencies. The record of some federal agencies concerned with the West's development has been such as to make it hard to distinguish their attitudes from the most exploitative private interests.

The Delaware River Basin Commission, of course, is only a partial model of the kind of regional instrument needed in

the mountain states, whose powers and areas of concern should be much broader. The precise design of such an instrument is beyond the purview of this essay and the capabilities of its author.

The point, rather, is to suggest the kind and scale of action needed for the saving of the mountain West—and to emphasize, once again, the urgency of the need. *D.C.*



In a front-page story in the *New York Times* recently, it was reported that a Manhattan lawyer had been arraigned after firemen found more than 15,000 public library books in a Greenwich Village apartment that he evidently rented just to store the books. Books were piled to the ceilings, leaving only a two-foot pathway through the four-room apartment. The lawyer, who was charged with criminal possession of stolen property, was asked how he got the books out of the library; he replied, "In large quantities." It took 20 men working three days to remove the books in seven truckloads. His explanation for taking the books was, "I like to read."

Such a drastic approach is by no means suggested even for today's professional who realizes that without books it is impossible to keep on top of things in this era of an unprecedented flow in information. For an architect, books are as necessary a tool as a drawing board. It's even rumored that many architects never go near a drawing board once they've

reached a certain level as decision makers; but it's hard to believe that any really successful architect isn't still dependent upon the printed word regardless of the heights that may have been reached in professional accomplishments. Indeed, such a belief is basic for this very journal.

There is an old saying, "A man is known by the company his mind keeps." It seemed a good idea, then, to ask a few architects (both practitioners and academicians) to list about a dozen books on architecture and its related disciplines that they consider appropriate to give a colleague, client or friend for Christmas. The expectation in this query was that the books suggested would give insights into those seminal volumes which have influenced their lives and careers. The replies received in this very informal and unscientific survey have varied from an honest "I tend to give my own books since an author's discount renders it economically feasible" to an equally honest (but exaggerated, we hope) "I haven't read an architectural book in five years."

Forrest Wilson, AIA, who likes to put things in perspective, says in response to our query: "It is probably necessary to explain what Christmas means to each of us before you hear why we give presents in the first place. To me, it is a good excuse for giving a present in celebration of the year to come. We usually give or receive hangovers for New Year's. Books are like bricks, a terminal form, one of man's discoveries that cannot be improved."

Wilson, a prolific author himself and chairman of the department of architecture and planning at the Catholic University of America, continues: "Our ways of dispensing knowledge and information may change, as will our building methods; but the innate satisfaction of building a building bit by bit, and adding to our little store of knowledge in the same way, cannot be satisfied in any other fashion. A book has a slow sequential pace. We can go backwards or forwards. A book does not intrude with sound or the immediacy of flashing pictures. It does not disappear when we turn a switch. At a time of strident, all-enveloping intrusion demanding our attention, usually to manipulate our thoughts and actions, a book sits there ready and waiting patiently and quietly for our attention. A book is between it and us; we never open it until we are ready. I give books because I like them and the people to whom I give them."

After such an eloquent defense of books, what will Wilson give for Christmas (besides his own excellent books)? His list:

Architectural Graphics, Frank Ching (Van Nostrand Reinhold, 1975, \$4.95): "A beautiful paperback for under \$5. The medium is the message. The book is entirely hand-drawn and lettered by one of the best architectural draftsmen I know. The message is technical; its presentation, art. I give this book to share with my friends the pleasure of turning the pages."

Architecture for the Poor, Hassan Fathy (University of Chicago Press, 1973, \$10.95): "If Christmas and architecture are to mean anything at all, both will have to address the major problem of our time: a concern for unhoused people. Housing is all too frequently left out of definitions of architecture as charity is often left out

of definitions of Christianity. The resurrection of the mud brick in the land of the Pharaohs seems as important as the resurrection of the architect's responsibility for the major problem of our time, the housing of ordinary people."

Experiencing Architecture, Steen Eiler Rasmussen (2nd edition, MIT Press, 1962, \$10 hardbound, \$2.95 paperback): "A clearly written, lucid description that every beginner is able to understand and enjoy. In our present world of marketing architectural services, this is a good book to go back to, reminding us why we are marketing architectural services in the first place."

(The inclusion of the next book calls for a note. At first, we thought we would include only books in print, but a respondent objected, saying that he considered "any book still obtainable by any means as being in print." Hence, when the price of a book is not given, it means that we've been unable to verify that the book is still in print. But the paperback market being what it is today, the book may be available soon. If you want to give the book this Christmas, however, you may want to seek out a secondhand bookstore.)

Let in the Sun, Woody Klein (Macmillan, 1964): "This is the story of a New York tenement from the point of view of the landlords and tenants, politicians and social reformers. It's an important book to me because it is one of the very few descriptions of housing ordinary people, like you and me."

La Vida: A Puerto Rican Family in the Culture of Poverty, San Juan and New York, Oscar Lewis (Vintage, 1965, \$2.95): "An anthropologist tells architects more about the programming of housing needs than planning studies. Lewis was a scholar who realized that his research was tragic drama. There is much to be learned in reading the last chapter which describes the evaluation of a housing project by one of the tenants better than all the statistics ever published."

The Death and Life of Great American Cities, Jane Jacobs (Vintage, 1961, \$1.95): "This classic has been disputed by planners, architects and politicians. Much of what Jacobs said 14 years ago are now ideas in good currency, which

means that they are comfortably ignored. Her description of the forces giving life and spirit to the city are still in operation and a good thing to remember at the beginning of a new year."

The Arts in Modern American Civilization, John A. Kouwenhoven (originally published as *Made in America*; Norton, 1967, \$2.25): "This provocative study examines the conflict between the 'cultivated' and the 'vernacular' style in the development of a truly American esthetics in technology, architecture, art, the movies, literature and jazz. The book is a good reminder that we have a greater heritage than the Nixon years might lead us to believe."

Supports: An Alternative to Mass Housing, N. J. Harbraken (Praeger, 1972, \$3.95): "The design of housing projects seemed a hopeless, contradictory mess until I read Harbraken 10 years ago. 'The architect's task,' he says, 'is not to produce a product called housing but to make the process of housing possible. The act of living makes a dwelling, not its design.' His statements seem to me to free architects from a responsibility that they have uneasily assumed and ineptly discharged and in its place have given architects a much greater but less egocentric responsibility."

Play and Interplay: A Manifesto for New Design in Urban Recreational Environment, M. Paul Friedberg with Ellen P. Berkeley (Macmillan, 1970, \$9.95): "If Christmas still has anything to do with children, this might be a good book to give architects. If a little child shall lead them, then Friedberg can give that child a place to learn that leadership like play is best when it is shared and happy."

Vitruvius, The Ten Books of Architecture (Dover, 1960, \$3): "This public relations effort of the Roman architect Marcus Vitruvius Pollio to sell his professional services to Caius Julius Caesar Octavianus, Augustus, still makes wonderful reading. The book probably was written during the time Christmas was invented by the people who eventually gave us Easter. It was done for the politician responsible for the lack of housing that caused Jesus to be born in a manger instead of a Roman Hilton."

Wilson, who says that his selections tend toward books on housing and children "in memory of a child born in a manger," throws in two paperbacks on riverboats:

The Western Rivers Steamboat Cyclopoedum or American Riverboat, Structure and Detail, by Alan Bates (Hustle Press, Leonia, N.J.) and *James Rees and Sons Company Illustrated Riverboat Catalog* (Capt. Frederick Way Jr., 121 River Ave., Sewickley, Pa. 15143).

"The unique circumstances that sired the riverboat could only occur on the American western rivers," says Wilson. "The steam boat, the balloon frame house, the railroads, bridges and tunnels that were built at this time in our history seem to be little-researched and forgotten events. Mark Twain and his life on the Mississippi is to me a better memory for Christmas than Scrooge's bookkeeper."

Stephen A. Kliment, AIA, architect and editorial consultant in New York City and also an author, has some candidates for a Christmas list. He suggests:

Modern Building, Walter Curt Behrendt (Harcourt Brace, 1937): "Best introduction to what caused modern architecture and why that I've read. My mentor from my first years in architectural school on."

Space Adrift, John J. Costonis (University of Illinois Press, 1974, \$10): "Alerts you to the fact that there are ways to save buildings and make money, too. There's no other way in the long run."

Community and Privacy: Toward a New Architecture of Humanism, Serge Chermayeff and Christopher Alexander (Doubleday, 1963, \$1.95): "Gets to the heart of the problem by expressing the two concepts in three dimensions."

Urban Renewal: The Record and the Controversy, James Q. Wilson (MIT Press, 1967, \$12.50 hardbound, \$4.45 paperback): "An eye opener when it first came out. One of the forerunners (though I doubt if intentional) of the neighborhood conservation movement."

The Railroad Station: An Architectural History, Carroll L. Meeks (Yale University Press, 1956, \$25): "I happen to be a railroad buff, and this book is one of the best."

Architecture and the Aesthetics of Plenty, James M. Fitch (Columbia University Press, 1961, \$12.50): "Why is American architecture what it is? Some answers, but mainly a great mind at work, and one that can write English."

John Blanton, AIA, who practices architecture in Manhattan Beach, Calif., has contributed many thoughtful book reviews to this magazine. His list and comments:

Survival Through Design, Richard Neutra (Oxford University Press, 1969, \$2.95): "My former boss and mentor opened up a whole range of functions more vital than structure. In spite of any difficulty or flaws, this book deserves more serious attention."

Origins of Functionalism Theory, Edward R. De Zurko (Columbia University Press, 1957, \$9): "The author shows that both functionalist and formalist approaches were always with us, just as they are today. It may have been written to show a development toward the functionalist theory of modern architecture, but a conclusion that both approaches are

inevitable (even in the same architect) can as easily be made from his evidence, as I remember it."

Architecture, Ambition and Americans: A Social History of American Architecture, Wayne Andrews (Free Press, 1964, \$3.45): "A delightful, myth-destroying, irreverent, but serious, history of American buildings, their architects and their clients. You can love this book even if you hate history."

The Literature of Architecture: Evolution of Architectural Theory and Practice in Nineteenth Century America, Don Gifford (Dutton, 1966, \$3.75): "A display of architectural thought from the 19th century. It shows fresh, even contemporary, ideas and stale myths within the same persons (just as with our contemporaries). The basic ideas of Sullivan and Wright seem to have preceded them."

Two Chicago Architects and Their Clients: Frank Lloyd Wright and Howard Van Doren Shaw, Leonard K. Eaton (MIT Press, 1972, \$10 hardbound, \$3.95 paperbound): "Eaton shows, contrary to preconceptions, that the eclectic Shaw was

a real architect and that Wright was a real person. This new picture of Wright in his Oak Park years adds to his stature as it subtracts from his myth."

Five California Architects, Esther McCoy (Praeger, 1975, \$9.95): "From my adopted region, some more real persons who did work significant by its quality. I feel as though they are friends—thanks to the author's skill."

Schindler, David Gebhard (Viking, 1972, \$3.95): "One of the five who never stopped searching. An independent mind writes about an independent mind."

Charles F. A. Voysey, Architect, David Gebhard (Hennessey & Ingalls, 1975, \$12.95): "This or any other of Gebhard's monographs that you can get your hands on. Beneath the factual annotations of the historian is a rich, open, creative mind."

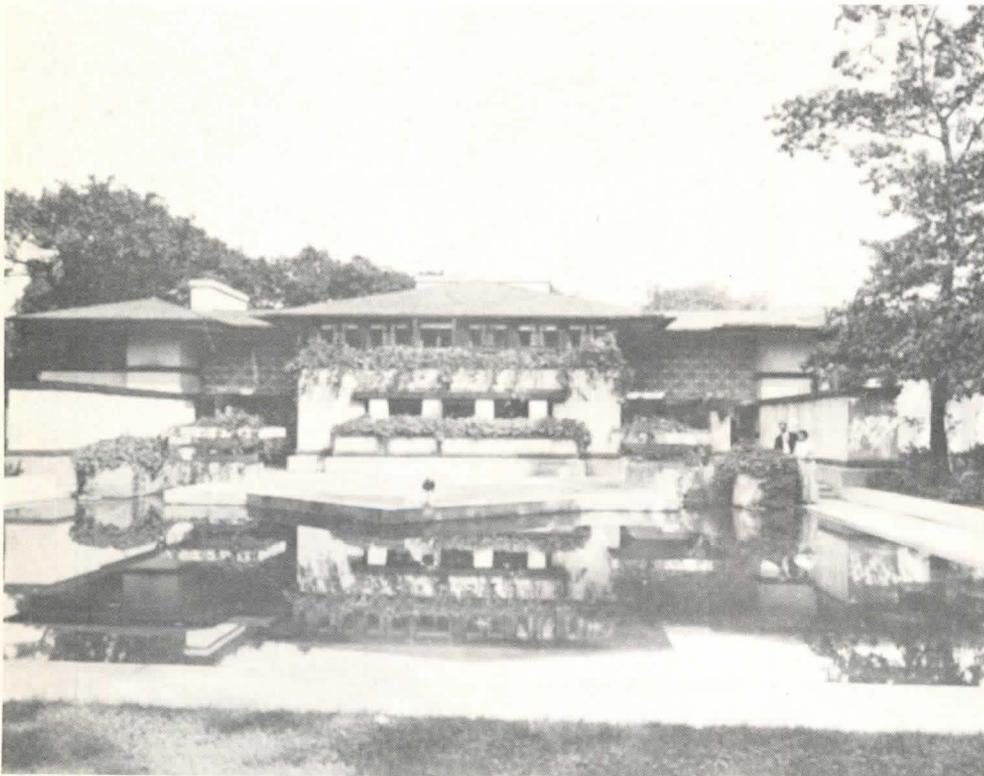
Learning from Las Vegas, Robert Venturi et al. (MIT Press, 1972, \$25):

"Selected for its basic humanity and common sense underlying all the more obvious layers and also for its stimulating implications. I think that my review in the AIA JOURNAL (Feb. '73) expresses complete tolerance towards the few doubts I have concerning the ideas of the authors; the buildings are of secondary interest to me."

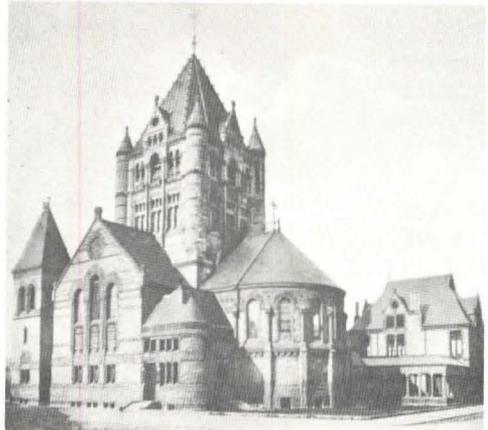
The Early Sunset Magazine 1898-1928, edited by Paul C. Johnson. (California Historical Society, 1973, \$4.95): "The chapters on buildings still have interest. One chapter puts futurism in perspective, with the design of a continuous linear city with railroad tracks below and bicycle paths on top. Everything would be piped into your home, in this design, including carbon dioxide for putting out small fires and fizzing up your drinks. The designer must have felt significant."

They Chose to Be Different: Unusual California Homes, Chuck Crandall (Chronicle Books, 1972, \$9.95): "Primarily a picture book that gives an idea of what is being done in northern California that I didn't have from the usual sources. We need the same for southern California and Houston and Nebraska and the Southeast and etc."

Architecture 2000: Predictions and Methods, Charles Jencks (Praeger, 1971, \$7.50): "A balanced look at the future. I like the beautiful graph showing pulsa-



Coonley house by Wright, 1908: "Two Chicago Architects and Their Clients."



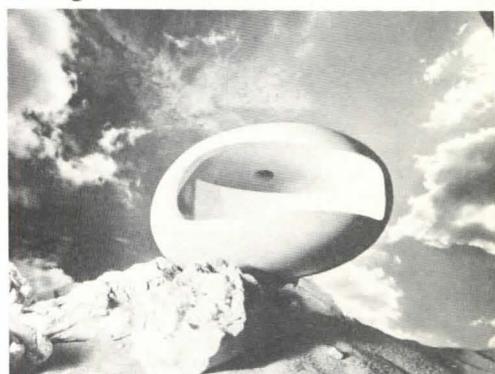
\$5.95 paperbound): "A major breakthrough in understanding ecological conditions and their relation to man-made changes, while devising at the same time a practical methodology to deal with these problems."

Survival through Design, Richard Neutra (Oxford, 1969, \$2.95): "Still a basic, unsurpassed discussion of considerations basic to design; also an exposition of Neutra's 'biorealism'."

The City in History, Lewis Mumford (Harcourt, Brace, 1961, \$2.95): "No architect can do without this profound survey of the evolution of civilization."

Technics and Civilization, Lewis Mumford (Harcourt, Brace, 1934, \$3.95): "Mumford's deep humanism shows beautifully in this discussion of the accomplishments and pitfalls of our age."

Mechanization Takes Command, Siegfried Giedion (Norton, 1969, \$3.95): "Giedion's best book in which he presents both a brilliant and detailed documentation of the machine's influence on our time and a humanistic warning of the dichotomy it has created between thinking and feeling."



The Architecture of Fantasy, Ulrich Conrads and H. G. Sperlich (Praeger, 1962, \$16): "A remarkable book that brings back to our consciousness that modern architecture at its best was produced, as great architecture is at any time, with the imaginative force of fantasy."

Glass Architecture, Paul Scheerbart; bound with Bruno Taut's *Alpine Architecture*, edited by Dennis Sharp (Praeger, 1972, \$8.50): "An important source book on the early stages of European modernism. Although the movement is usually labeled Expressionism, the under-

tions of trends, but not his categorization of certain architects. The book suggests that we can think of what we *can* do rather than what we *should* do."

Donlyn Lyndon, AIA, author and practitioner of architecture who also serves as professor of architecture at the Massachusetts Institute of Technology, says that he would be "less than candid if I didn't put at the top of my list of Christmas purchase books *The Place of Houses*, of which I am co-author with Charles Moore and Gerald Allen (Holt, Rinehart & Winston, 1974, \$17.95). The book is intended for a general audience and would be a "useful gift from architects to their clients." (Lyndon is not alone, for other respondents have this book on their lists.)

Lyndon says that his list contains some "oddballs":

Egyptian Architecture as Cultural Expression, Earl Baldwin Smith (Century House, 1968, \$3.95): "One of the most profound though somewhat archaic studies in architectural history, with magnificent drawings that are themselves a treat."

Design with Climate, Victor V. Olgay (Princeton University Press, 1963, \$25): "Seems a timely buy since it's the source still of much present thinking on energy conservation."

The Idea of Louis Sullivan, John Szarkowski (University of Minnesota Press, 1956): "Still one of the finest books of architectural photography—good subject, too."

Rome of the Renaissance, Paolo Portoghesi (Phaidon, 1972, \$35): "Splendid drawings and photographs. Also suggest Boromini's Rome."

Skyscraper Style: Art Deco, New York, Cervin Robinson and Rosemarie Haag Bletter (Oxford University Press, 1975, \$20): "Best of the '20s revisited, and very handsomely photographed."

The Search for Environment, Walter Creese (Yale University Press, 1966): "Fine, humane study of the initial impetus to plan for livable communities in terms of their inhabitants."

H. H. Richardson and His Office: Selected Drawings, James F. O'Gorman (David R. Godine, 1974, \$25 hardbound, \$12 paperbound): "Splendid, informa-

tive, provocative catalog illustrated with many fine drawings of buildings that we'd all like now to know."

More Sky, Otto Piene (MIT Press, 1973, \$9.95): "A spirit-lifter from a man who knows what he likes; it's art that steps into the present world. Splendid section of designs for flags."

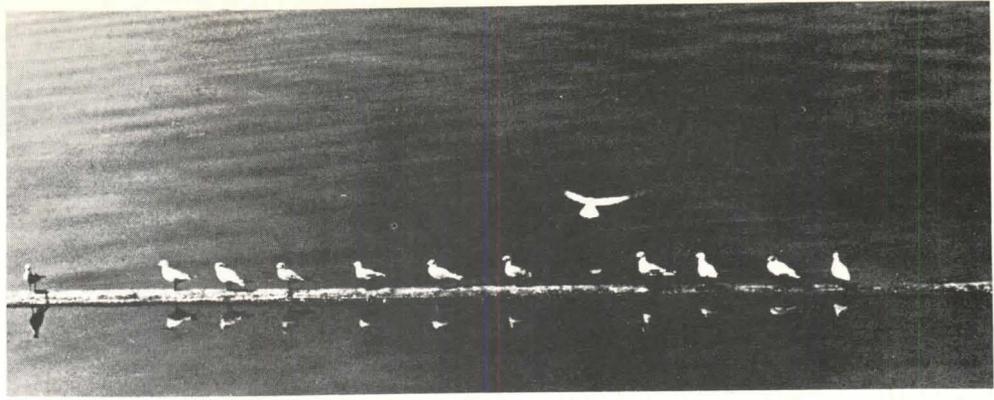
H. H. Waechter, AIA, practitioner of architecture in Creswell, Ore., an author and a frequent reviewer of books in this magazine, says that his list contains some "basics." He recommends:

An Autobiography, Frank Lloyd Wright (Duell, Sloan & Pearce, 1943): "There are many books by Wright which bespeak his broad ways of thinking and his poetic style, but his autobiography perhaps gives the best insight into the development of a personal philosophy that had a worldwide impact on modern architecture."

Kindergarten Chats, Louis Sullivan (Wittenborn, 1968, \$7.50): "These words of an architectural genius are precious as an expression of his unusual personality and of the emerging spirit of an American architecture."

Architecture as Space, Bruno Zevi (Horizon, 1957, \$12.50): "Zevi is an historian and critic with penetrating insight and forceful expression, leading us away from the overemphasized notions of form-giving, delight and facade decoration right back to the essential matter of architecture: the space that facilitates our environmental experience, for better or worse."

Design with Nature, Ian L. McHarg (Doubleday, 1971, \$19.95 hardbound,



lying significance is in the nature of the artistic and social pathos that projects us into the great challenges of our time and points to the promise of a better society in a better environment."

Programs and Manifestos on 20th Century Architecture, Ulrich Conrads, editor (MIT Press, 1971, \$10): "This is the only English language source that recalls the fervor of the philosophical thought and social ethos that motivated the great leaders of modern architecture."

The Hidden Dimension, Edward T. Hall (Doubleday, 1966, \$5.50): "The abstract concepts of architects often tend to fail in making connection with the needs and understanding of the user. The complexity of modern life is overwhelming, and we don't yet know whether cybernetics will lead us further in or out of the confusion. Before systematization and methodology can be successfully applied, we need to know more about human behavior in the designed environment. Hall's anthropological examination of man's use of space is both helpful and revealing."

Noverre Musson, FAIA, also an author and an award-winning architect who is a principal of a Columbus, Ohio, firm, notes some books "important to me—to have or to give":

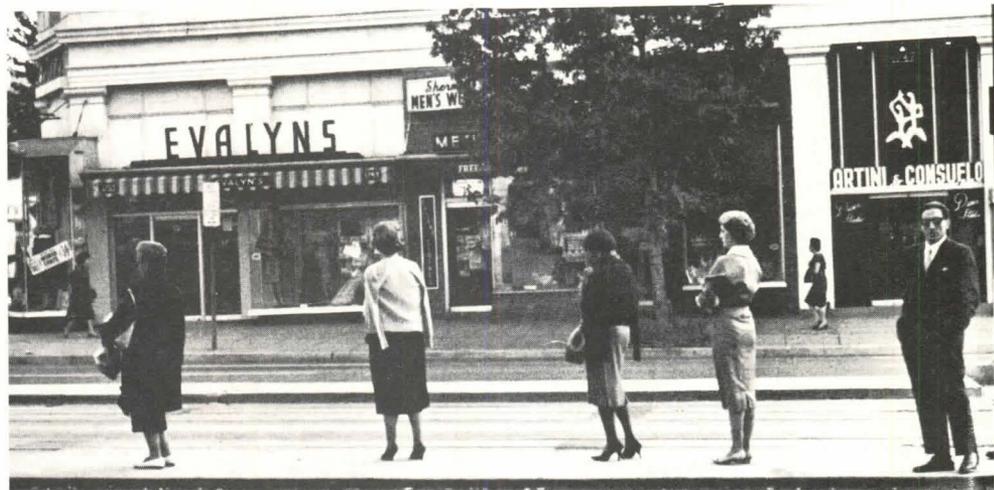
An Autobiography, Frank Lloyd Wright (Duell, Sloan & Pearce, 1943): "Architecture from the inside out, and as a way of life."

The Hidden Dimension, Edward T. Hall (Doubleday, 1966, \$5.50): "Intriguing—for pondering; may not actually translate into design cues, ideas, hunches." He also suggests Hall's *The Silent Language* (Doubleday, 1973, \$1.95).

The Autobiography of an Idea, Louis Sullivan (Dover, 1924, \$2.50): "Architecture as a passionate philosophy."

Experiencing Architecture, Steen Eiler Rasmussen (2nd edition, MIT Press, 1962, \$10 hardbound, \$2.95 paperback): "An eye-opener for professional or layman interested in architecture as environment."

The Death and Life of Great American Cities, Jane Jacobs (Vintage, 1961, \$1.95): "A biased, parochial but penetrating look at why our cities are like they



Natural no-contact groupings for birds—and people: "The Hidden Dimension."

are. You can't really extrapolate Greenwich Village into the cities of a nation, but many of the genes are there."

Personal Space: The Behavioral Basis of Design, Robert Sommer (Prentice-Hall, 1969, \$2.45): "A psychologist's careful and revealing look at people in a few kinds of space."

Notes on the Synthesis of Form, Christopher Alexander (Harvard University Press, 1964, \$6.75 hardbound, \$2.25 paperback): "A fascinating, elaborate, pontifical, sure-fire gimmick for arriving at irrelevant decisions, but he says some significant things about design."

Cities of Destiny, Arnold Toynbee (McGraw-Hill, 1967): "If cities are, in fact, man's greatest art form, this one is a thriller. It's very hard to read, however, not because of its content but because of its 10-pound coffee table book size."

The Art of Building Cities, Camillo Sitte (Reinhold, 1945): "A basic treatise on the perception, art, psychology and mechanics of man-made space."

Gardens Make Me Laugh, James Rose (Silvermine Publishers, 1965): "An amusing, entertaining and exceedingly serious course in how to look at people and gardens. My copy is underlined on every page."

Grass Roots of Art, Herbert Read (Wittenborn, 1947): "I've given a dozen copies away. Here's a theory (which I buy) about how great art—and architecture—evolves."

Morris Ketchum Jr., FAIA, president of the Institute in 1965, has a list of books that reflects, to a degree, his current interests as vice chairman of the New York City Landmarks Preservation Commission and his devotion to his native city:

AIA Guide to New York City, Edited by Norval White and Elliott Wilensky; sponsored by the New York chapter/AIA (Macmillan, 1968, \$6.95): "Even to a native-born New Yorker, like myself, this guide opens one's eyes to the total New York environment."

New York City Landmarks: A Study and Index of Architecturally Notable Structures in Greater New York, edited by Alan Burnham, FAIA (Municipal Art Society of New York, 1963, \$20): "Some are now gone forever; the survivors are their own battle cry for preservation."

The Arts in Modern American Civilization, John A. Kouwenhoven (Norton 1967, \$2.25): "The interrelationship of 'vernacular' architecture and 'vernacular' art."

History of Modern Art, H. H. Arnason (Abrams, 1968, \$28.50): "Said to be the most comprehensive book on painting, sculpture and architecture from the 19th century to today."

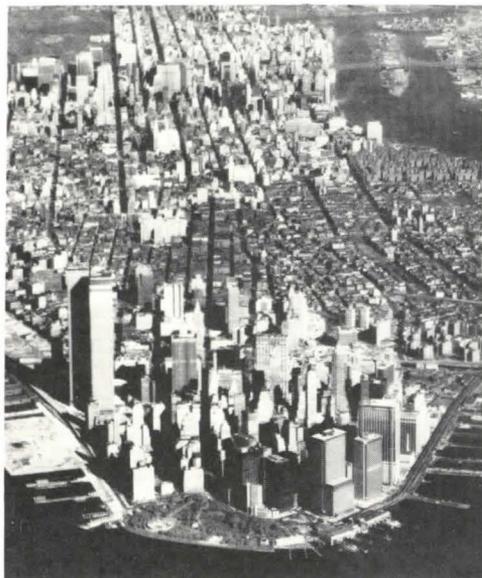
Pop Art, Lucy R. Lippard (Praeger, 1966, \$4.95): "What is it? One has to know."

The Forest and the Sea, Marston Bates (Vintage, 1960, \$1.95): "The interrelation of landscape design and architecture."

Ketchum also mentions a series by Sir Nikolaus Pevsner on the buildings of England (for which we have been unable to find an American publisher). Without these books, says Ketchum, "one could wander blindfold through England."

Space, Time and Architecture: The Growth of a New Tradition, Siegfried Giedion (5th revised edition, Harvard University Press, 1967, \$22.50): "The astonishing story of the architecture of the Industrial Revolution from Crystal Palace to Grand Central Palace."

History Preserved: A Guide to New York City Landmarks and Historic Districts, Harmon H. Goldstone and Martha Dalrymple (Simon & Schuster, 1974, \$12.95): "Again, to a native New Yorker, the city's history is revealed."



David A. Crane, AIA, chairman of the Crane Design Group in Houston and dean of Rice University's school of architecture, suggests:

Design of Cities, Edmund N. Bacon (Revised edition, Viking, 1974, \$20): "Excellent drawings, diagrams and color prints with commentary on the creative forces that are changing the face of the city."

The Notebooks and Drawings of Louis I. Kahn, edited by Richard Saul Wurman and Eugene Feldman (2nd edition, MIT Press, 1973, \$15.60): "A comprehensive collection of Kahn's drawings and sketches."

Team 10 Primer, edited by Alison Smithson (MIT Press, 1968, \$5.95): "An ageless essay on the role of the architect as discussed by a group of renowned architects. A casual format within which each expresses his own thoughts and ideas that are germane to his/her architecture."

Existence, Space and Architecture, Christian Norberg-Schultz (Praeger, 1971, \$3.95): "A creative essay on architectural perception; the use of line, space and color, and human interaction within the architectural experience."

Design with Nature, Ian L. McHarg (Doubleday, 1971, \$19.95 hardbound, \$5.95 paperbound): "A look at man and his environment; a thought-provoking analysis on the future of our natural environment."

Learning from Las Vegas, Robert Venturi et al. (MIT Press, 1972, \$25): "Commentary with large color illustrations about the great neon city and its impact on the present day 'strip' development."

The Shape of Community, Serge Chermayeff and Alex Tzonis (Penguin, 1971, \$2.95): "An absorbing book describing the contrast between the natural and the technological environment, 'a structure not too dissimilar from that of a crystal in evolution.' Many small fine line sketches."

Le Corbusier: My Work (Watson-Guptill, 1974, \$25): "Traces Corbu's early history, including his art education and early designs of houses to his later works. Color illustrations."

A Sense of Unity: The Sufti Tradition in Persian Architecture, Nader Ardalan and Laleh Bakhtiar (University of Chicago Press, 1973, \$15): "A beautifully composed and eloquently written and illustrated collection of Islamic architecture."

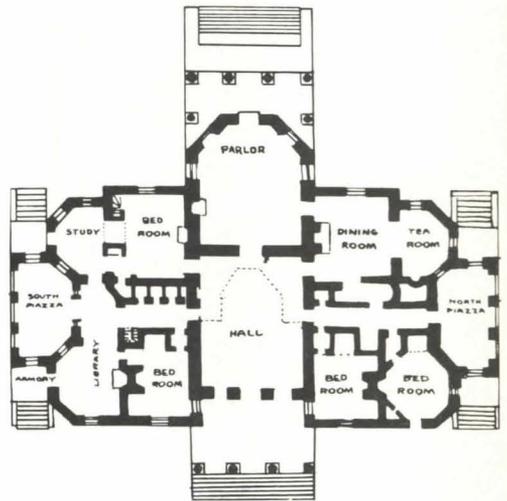
Architecture and Design, 1890-1939: An International Anthology of Original Articles, Timothy Benton and Charlotte Benton (Watson-Guptill, 1975, \$12.50): "A pictorial account of the architecture and artifacts of the modern movement."

Le Corbusier, R. F. Jordan (Hill & Co., 1970, \$10): "An informative account of the life and work of Le Corbusier; excellent reproductions in color and black and white."

Retracking America: A Theory of Transactive Planning, John Friedmann

(Doubleday, 1971, \$7.95): "A very interesting book on the theory of architectural planning in a rapidly growing and changing America."

Francis D. Lethbridge, FAIA, who heads his own architectural/planning firm in Washington, D.C., lists books that he "has enjoyed most during the past few years":



Mr. Jefferson, Architect, Desmond Guinness and Julius T. Sadler Jr. (Viking, 1973, \$14.95): "A sumptuously produced addition to the record of Jefferson's architectural work."

Paris Through the Ages, Pierre Couperie (Braziller, 1968, \$12.50): "An elegantly organized and presented topographical and architectural history of the city."

The Making of Classical Edinburgh, A. J. Youngson (Aldine; published by the University of Edinburgh Press, 1966, \$12.50): "One of the most beautifully written and illustrated books on urban planning and development ever published."

Pride of Place (London, Civic Trust, 1972): "A small but remarkable handbook of civic physical improvements, prepared as 'a manual for those wishing to improve their surroundings.'"

Streets for People, Bernard Rudofsky (Doubleday, 1969, \$14.95 hardbound, \$5.95 paperbound): "Trenchant and entertaining observations on the quality of urban life."

Akenfield: Portrait of an English Village, Ronald Blythe (Pantheon, 1969,



\$6.95): "The oral social history of an English village—a profoundly interesting and moving book."

The Anti-Rationalists, edited by Nikolaus Pevsner and J. M. Richards (University of Toronto Press, 1973, \$17.50: "A lovely gift book, attractive and stimulating."

The Character of Towns: An Approach to Conservation, Roy Worskett (Architectural Press, 1969): "A valuable and attractive addition to Cullen's *Townscape* and other contributions to urban and town conservation and planning which have been developed and published by the *Architectural Review* in England."

American Architecture and Urbanism: A Historical Essay, Vincent Scully (Praeger, 1969, \$18.50 hardbound, \$5.95 paperbound): "An interesting and critically perceptive book, it belongs in the company of Mumford's *Sticks and Stones* and James Marsden Fitch's *American Building and the Forces That Shaped It*."

Heavenly Mansions, John N. Summerson (Norton, 1963, \$2.10): "A model of style for architectural essayists who too often equate intellectual profundity with literary pretentiousness or obscurity; a classic still available in paperback."

The Place of Houses, Donlyn Lyndon, Charles Moore and Gerald Allen (Holt, Rinehart & Winston, 1974, \$17.95): "Imaginative and provocative, a good antidote for the architectural blahs."

Herbert McLaughlin, AIA, a principal in the San Francisco firm of Kaplan/McLaughlin, says: "Still the best book on architecture is *The Architecture of Humanism* by Geoffrey Scott (Norton, 1974, \$2.95; first published in 1954 by Doubleday). "Nothing since it was written," says McLaughlin, "has begun to approach its insights into the real reason why architects do buildings which appear the way they do, as opposed to the arguments we use to justify our decisions."

McLaughlin also suggests:

Asylums: Essays on the Social Situation of Mental Patients and Other Inmates, Erving Goffman (Aldine, 1961, \$12.95): "A good insight into the nature of the institutions we build."

Defensible Space: Crime Prevention

Through Urban Design Oscar Newman (Macmillan, 1972, \$9.95 hardbound, \$2.95 paperbound): "Our education, attitudes and general gestalt are to be large-scale sculptors and monument builders. Our explanations for our monuments tend to be technical and functional and ultimately nonsensical. This book best begins to point all this up."

The Making of a Counter Culture, Theodore S. Rozack (Doubleday, 1969, \$1.95): "The most thought-provoking book about the professional man's relationship to his society, particularly the architect who builds the monuments of our democratic society."

Architecture of Frank Furness, James F. O'Gorman (Philadelphia Museum of Art, 1973): "Beautiful reporting on the work of a bold and relatively little known American who was Louis Sullivan's first employer, but is much more important in his own right."

Built in the U.S.A., edited by Elizabeth Mock et al. (Arno, 1970, \$16; reproduction of a Museum of Modern Art publication of 1944): "Not only an excellent survey of American work up to 1952, but also perhaps more valuable in that it shows very clearly the difference between the worth of that period and the value people placed on it and what we do today, which is infinitely more arbitrary and cold."

McLaughlin says, "Other books which appeal to me are: *Architecture Without Architects*, Bernard Rudofsky (Doubleday, 1969, \$4.95); *In the Nature of Materials: The Buildings of Frank Lloyd Wright, 1887-1941*, Henry-Russell Hitchcock (Da Capo, 1969; reproduction of the 1942 edition, \$18.50), and *Lost America*, Constance Greiff (2 vols., Pyne Press, 1971-72, \$17.95 each). "I wish there were a good book on Richard Morris Hunt, but I don't know of one."

John J. Desmond, FAIA, practitioner of architecture in Hammond, La., is evidently an admirer of Lewis Mumford, including four of that author's books in his suggestions:

The City in History, Lewis Mumford (Harcourt, Brace, 1961, \$2.95): "Full and deep account of cities, architecture and civilization as only Mumford can

illuminate them; also *The Culture of Cities* by Mumford (Harcourt-Brace, 1970, \$5.75)."

The Brown Decades: A Study of the Arts in America, 1865-1895, Lewis Mumford (Dover, 1955, \$20): "An unusually important book that points up the significance of 19th century architects, particularly Richardson."

The Pentagon of Power: The Myth of the Machine, Lewis Mumford (Harcourt, Brace, 1970, \$12.95 hardbound, \$4.95 paperbound): "Timely—and prophetic."

Carolingian and Romanesque Architecture, 800-1200, Kenneth J. Conant (Penguin, 1974, \$50 hardbound, \$9.95 paperbound): "Authoritative and exciting recount of the forces of construction and form in a new beginning."

Architecture, Nineteenth and Twentieth Centuries, Henry-Russell Hitchcock (Revised edition, Penguin, 1971, \$20): "Good background for any study of today's architecture."

Mont-St.-Michel and Chartres, Henry Adams (Doubleday, 1959, \$1.95; also other publishers): "Romantic account by an early and erudite American historian; relates architecture to a full culture."

American Buildings and Their Architects, William H. Pierson (Doubleday, 1970, \$12.50): "Well done."

The Autobiography of an Idea, Louis Sullivan (Dover, 1924, \$2.50): "The seminal ideas of modern architecture."

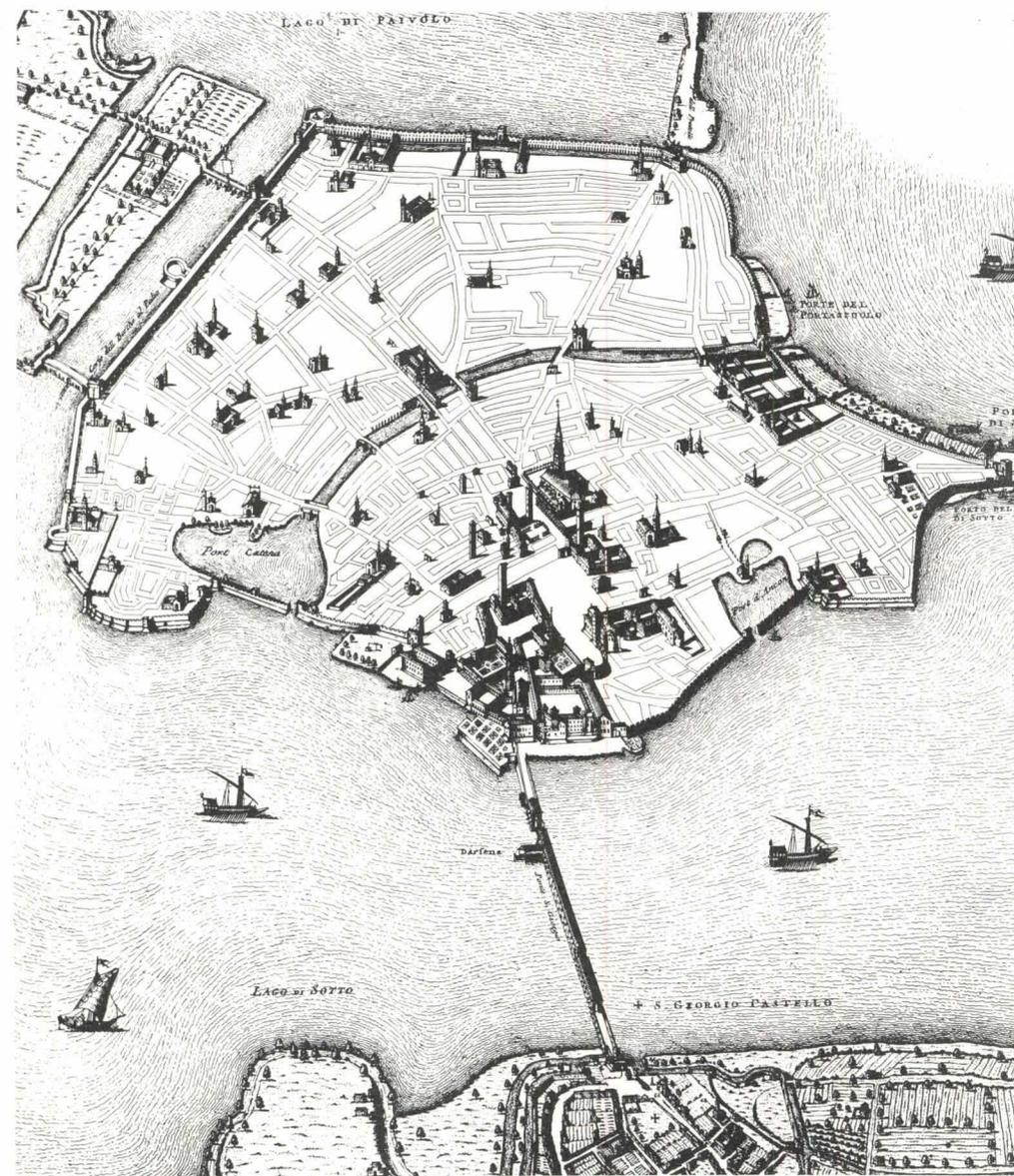
An Autobiography, Frank Lloyd Wright (Duell, Sloan & Pearce, 1943): "An unsurpassed personal account by a real architect."

American Architecture and Urbanism, Vincent Scully (Praeger, 1969, \$18.50 hardbound, \$5.95 paperbound): "An easy to read summary of America's contributions to the larger planning."

Design of Cities, Edmund N. Bacon (revised edition, Viking, 1974, \$20): "A good summary."

Urban Design as Public Policy: Practical Methods for Improving Cities, Jonathan Barnett (McGraw-Hill, 1973, \$21): "How to get it done."

Space, Time and Architecture, Siegfried Giedion (5th revised edition, Harvard University Press, 1967, \$22.50): "A classic."



Medieval cities made a great contribution to urban design: "Design of Cities."

Mies van der Rohe, Werner Blaser (Revised edition, Praeger, 1972, \$8.50 hardbound, \$3.95 paperbound): "A very good volume on Mies' work."

The Earth, the Temple and the Gods, Vincent Scully (Yale University Press, 1962): Imaginative and enlightening account of the siting of Greek buildings."

The Gothic Cathedral, Otto von Simson (Princeton University Press, 1973, \$17.50): "The best book I know on Gothic construction. Incisive."

Discourses on Architecture, Eugen E.

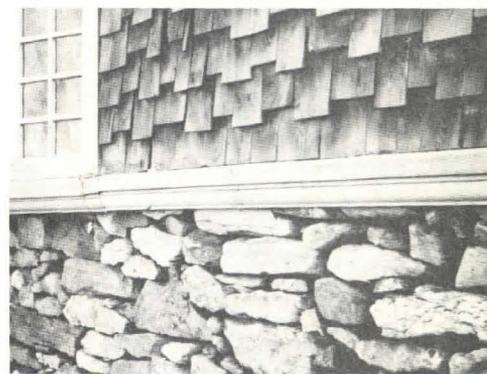
Viollet le Duc (2 volumes, Osgood, 1875-81): "Masterful."

John F. Hartray, AIA, of Chicago, a member of the Institute board, says: "I can think of only two recent books on architecture that have stuck to my ribs." They are: *The Shingle Style Today*, Vincent Scully (Braziller, 1975, \$7.95 hardbound, \$3.95 paperbound) "which offers a readable insight into the theoretical origins of East Coast residential architecture, placing the work of Moore, Venturi,

et al., in its historic context, thereby making it less frightening to a simple boy from the Midwest," and *On Art and Architecture in the Modern World*, Norris Kelly Smith (American Life Foundation and Study Institute—Century House Americana—Watkins Glen, N.Y. 14891, 1974, \$15) because "Professor Smith, one of Washington University's human treasures, presents compelling and elegantly stated evidence that the most recent 175 years of our 200-year history have been a colossal mistake. These essays can offer some alarming and useful insights into a profession which has largely been programmed to see light at the end of the technological tunnel."

Hartray, practitioner of architecture, says that beyond these two books, his architectural reading for the year ("in preparation for some Italian touring") has consisted of a review of John Ruskin's *Stones of Venice* (Smith, Elder & Co., 1858-67) and Nikolaus Pevsner's *Outline of European Architecture* (revised edition, Penguin, 1960, \$6.95).

For reading in other fields, "and God knows we need it, there are three interesting books which hint at how we might



muddle through the deceleration of history, which was predicted by D. L. Meadows et al., in *Limits to Growth* (Universe, 1972, \$6.50): *Zen and the Art of Motorcycle Maintenance: An Inquiry into Values*, Robert M. Pirsig (Morrow, 1974, \$7.95); *Earthwalk*, Philip Slater (Doubleday, 1974, \$7.95); *Small Is Beautiful: A Study of Economics As If People Mattered*, E. F. Schumacher (Harper & Row, 1974, \$8)."

In conclusion, Hartray, who is said to be an omnivorous reader, says: "Beyond

this, all I can think of is *Architectural Graphic Standards*, C. G. Ramsey and H. R. Sleeper (6th edition, Wiley, 1970, \$44.95).

Ralph Rapson, FAIA, head of the architectural and planning firm of Ralph Rapson & Associates in Minneapolis, says that our inquiry posed "quite a problem for some of us antiquarian types." He suggests:

Can Our Cities Survive? José Luis Sert (Oxford University Press, 1942): "This analytical study of cities and their problems was a most influential book and far in advance of its time in forecasting the urban crisis."

The Autobiography of an Idea, Louis Sullivan (Dover, 1924, \$2.50) and *Kinderergarten Chats*, Louis Sullivan (Wittenborn, 1975, \$8.50): "Ideas as fresh and vital today as when written."

Complete Works, Le Coubusier (edited by Willy Boesiger, Wittenborn, dates and prices of volumes vary) and *Toward a New Architecture*, Le Corbusier (Praeger, 1970, \$3.95): "I find myself returning time and again to these books, not only for the challenging ideas and design solutions, but also for the beautiful drawings."

The Living City, Frank Lloyd Wright (New American Library, \$2.95); *On Architecture*, Frank Lloyd Wright (Grosset and Dunlap, 1960, \$2.45); *The Future of Architecture*, Frank Lloyd Wright (Horizon, 1953, \$12.50); *Drawings*, Frank Lloyd Wright (Horizon, 1962, \$17.50): "These books on Wright and others about him, such as H. R. Hitchcock's *In the Nature of Materials: The Buildings of Frank Lloyd Wright, 1887-1941* (Da Capo, 1969, \$18.50) are required reading for architect and layman alike. Wright's superb draftsmanship is inspirational."

Lost America, Constance Greiff (Pyne Press, 1971-72, \$17.95 for each of two volumes): "A nostalgic reminder of our architectural heritage and a devastating commentary on our inability to appreciate—and use—these significant accomplishments."

The Tastemakers, Russell Lynes (Grosset & Dunlap, \$2.25): "A witty and highly perceptive analysis of the 'battle of taste' in American cultural development."

The Barn: A Vanishing Landmark in North America, Eric Arthur and Dudley Witner (New York Graphic Society, 1972, \$27.50): "The beautiful overview of a building type that may well represent our highest architectural achievement."

Space, Time and Architecture, Siegfried Giedion (5th edition, Harvard University Press, 1967, \$22.50): "What can one say that will add to the luster of this classic? A must for a full understanding of contemporary design."

The New Architecture and the Bauhaus, Walter Gropius (MIT Press, 1937, \$2.45): "If not the most influential book relative to architectural education, then nearly so; required reading."

The New Architecture, Alfred Roth (Girsberger, 1940): "An early case study of revolutionary design."

The Culture of Cities, Lewis Mumford, Harcourt, Brace, 1970, \$5.75); *The City in History*, Lewis Mumford (Harcourt, Brace, 1968, \$4.95); *Roots of Contemporary Architecture*, Lewis Mumford (Dover, 1972, \$4.50): "Keen analysis, insight and evaluation of our times."

The Architecture of Humanism: A Study in the History of Taste, Geoffrey Scott (Norton, 1954, \$2.95): "A history of ideas and opinions, the relation of taste and ideas and the influence of each of these on the other."

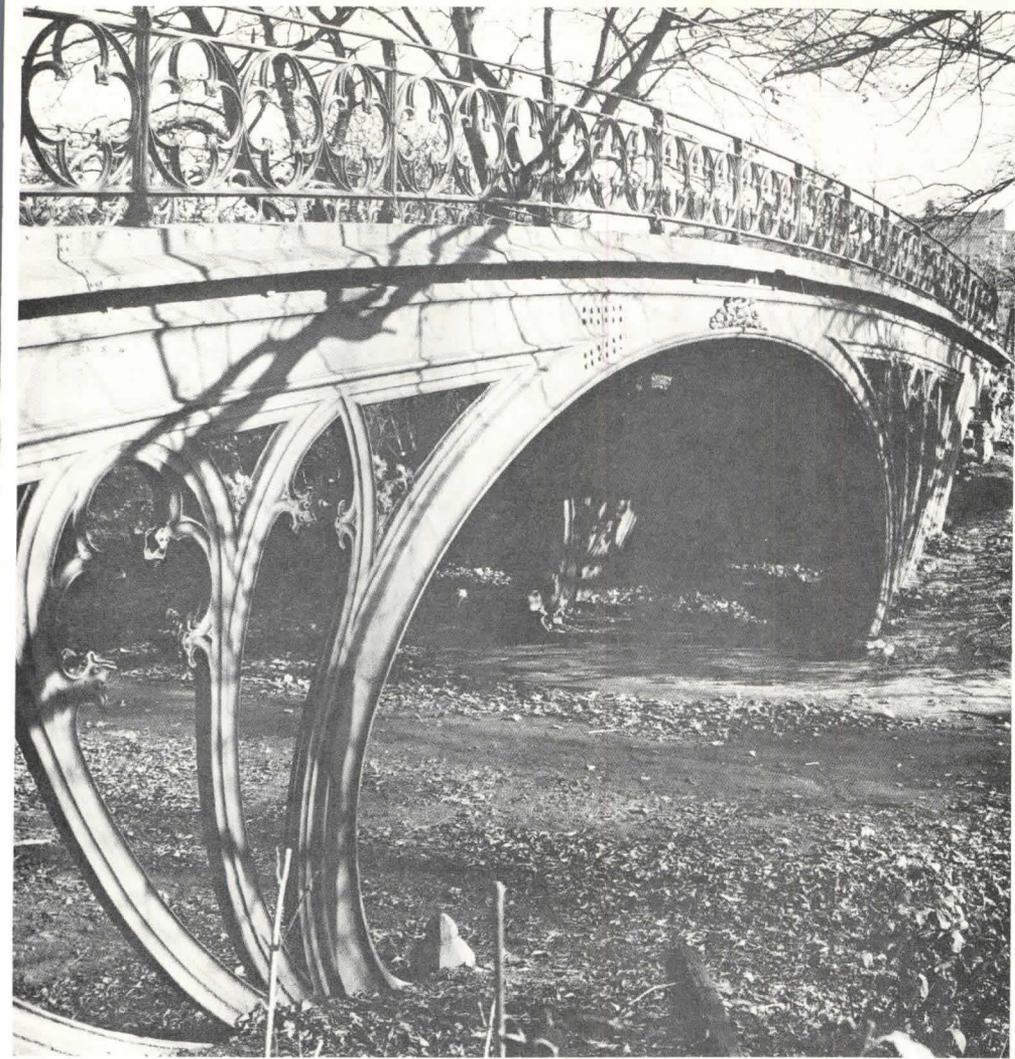
Great Architecture of the World, edited by John J. Norwich (Random House, 1975, \$24.95): "Basic concepts and ideas of great architectural achievements are beautifully presented with great clarity."

Hugh Newell Jacobsen, FAIA, practitioner in Washington, D.C., who has won awards for his restoration architecture as well as new buildings, reflects this proclivity in his suggestions, made without comment:

Victorian Houses: A Treasury of Lesser-Known Examples, Edmund V. Gillon Jr. and Clay Lancaster (Dover, 1973, \$3.50); *Victorian Taste: Some Social Aspects of Architecture and Industrial Design from 1820-1900*, John Gloag (Barnes & Noble, 1973, \$11.75); *Victorian Architecture: Its Practical Aspects*, James Stevens Curl (Fairleigh Dickinson, 1973, \$10); *The Decorative Tradition*, Julian Barnard (Pyne Press, 1974, \$12.95); *Cast-Iron Architecture in New York City*, Margot Gayle and Edmund V. Gillon Jr. (Dover, 1974, \$6); *Designs for Elegant Cottages and Small Villas*, E. Gyfford (2 volumes, J. Taylor, 1806); *The Place of Houses*, Charles Moore, Gerald Allen and Donlyn Lyndon (Holt, Rinehart & Winston, 1974, \$17.50);



A hospital now occupies the site of a California mansion: "Lost America."



Vaux' bridle path arch in Central Park: "Cast-Iron Architecture in New York."

Amphigorey, Edward Gorey (Putnam, 1972, \$12.95); *The Landscape of Man: Shaping the Environment from Prehistory to the Present Day*, Geoffrey and Susan Jellicoe (Viking, 1975, \$35); *Apartments for the Affluent: A Historical Survey of Buildings in New York*, Andrew Alpern (McGraw-Hill, 1975, \$19.95 until Jan. 31, 1976, then \$24.50); *Conversations with Architects*, edited by John Cook and Heinrich Klotz (Praeger, 1973, \$17.50 hardbound, \$6.95 paperbound); *L'Oeuvre et les Reves de Ledoux*, Yuan Christ and L. Soheim (Chene, 1971); *1976 Michelin Guide de France* (New Michelin Services de Tourism, \$5.95).

Michael B. Barker, AIP, administrator of AIA's department of environment and design and an omnivorous reader, as his many book reviews in this magazine testify, suggests:

The Scope of Total Architecture, Walter Gropius (Macmillan, 1962, \$1.25): "The founder of the Bauhaus School firmly believed that modern architecture could humanize technology and mass production. He did not see technology as a threat as Mumford does, but rather as a challenge to architects to produce architecture whose central theme is emphasis on the individual. This short book neatly

sums up Gropius' thought on modern architecture in the machine age."

The City in History, Lewis Mumford (Harcourt, Brace, 1961, \$2.95): "Mumford's 20th book on the culture of cities. Where Gropius is a theoretician and a practitioner, Mumford is a social philosopher and a critic. Mumford believes that man can create a human environment for himself but tragically has not done so since the Middle Ages. This book is Mumford's best."

The Death and Life of Great American Cities, Jane Jacobs (Vintage, 1961, \$1.95): "This book shocks the theorists and many of us pretenders by its alarming observations on how our most beloved theories in practice cause death rather than breathing new life into cities. The first three books that I've noted are, in a way, a trilogy, balanced parts of an architect's library."

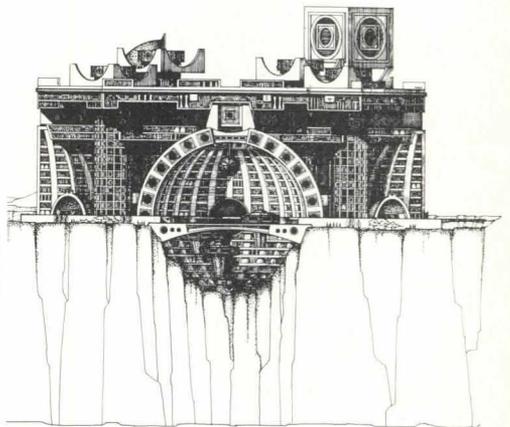
Design of Cities, Edmund N. Bacon (revised edition, Viking, 1974, \$20): "Clearly, the most beautiful book on my list. This is a personal, highly illustrated description of what cities are about. It is archeological in approach. The illustrations are smashing. No Barcelona table should be without at least one copy."

The City of Man, Christopher Tunnard (Scribner, 1971, \$5.95): "I've always

thought this book to be a bit over-titled. It is, however, a fascinating history of design and esthetics. It can be read in bits and pieces, which has some advantages for busy architects. There's an emphasis on social values and tastes which makes the book very intriguing."

Communitas: Means of Livelihood and Ways of Life, Paul Goodman and Percival Goodman (Revised edition, Vintage, 1960, \$1.95): "Truly a landmark in social and architectural commentary on 20th century values and mores. This book proves we are living in our own contemporary science fiction, which is all too painfully real. Easy reading and super entertainment."

Arcology: The City in the Image of Man, Paolo Soleri (MIT Press, 1969, \$15 hardbound, \$7.95 paperbound): "Charlatan or prophet, Soleri's work in Arizona has captured the imagination of students of architecture and the lay public. The scope of his thought and his sculptural conclusions lead us to the question: messiah or misfit? Make up your own mind



with this beautifully illustrated book that sums up the work of this unique individual."

Design with Nature, Ian L. McHarg (Doubleday, 1971, \$19.95 hardbound, \$5.95 paperbound): "How can you do an environmental impact statement without having first read this book? Like the Corps of Engineers, obviously. McHarg was the first one to put social values and technology together to create the quasi-science of environmental analysis. This is a milestone volume which tells what it's all about."

Dave Clarke, executive director of the Association of Collegiate Schools of Architecture, says: "The only book I've read unrelated to architecture is published by the telephone company." The books that he suggests "are offered entirely for their own sake; not for what they'll get you."

He begins with *The Place of Houses*, by Donlyn Lyndon et al., as a "carefully thought out effort by some of our best designers and the first collection of their

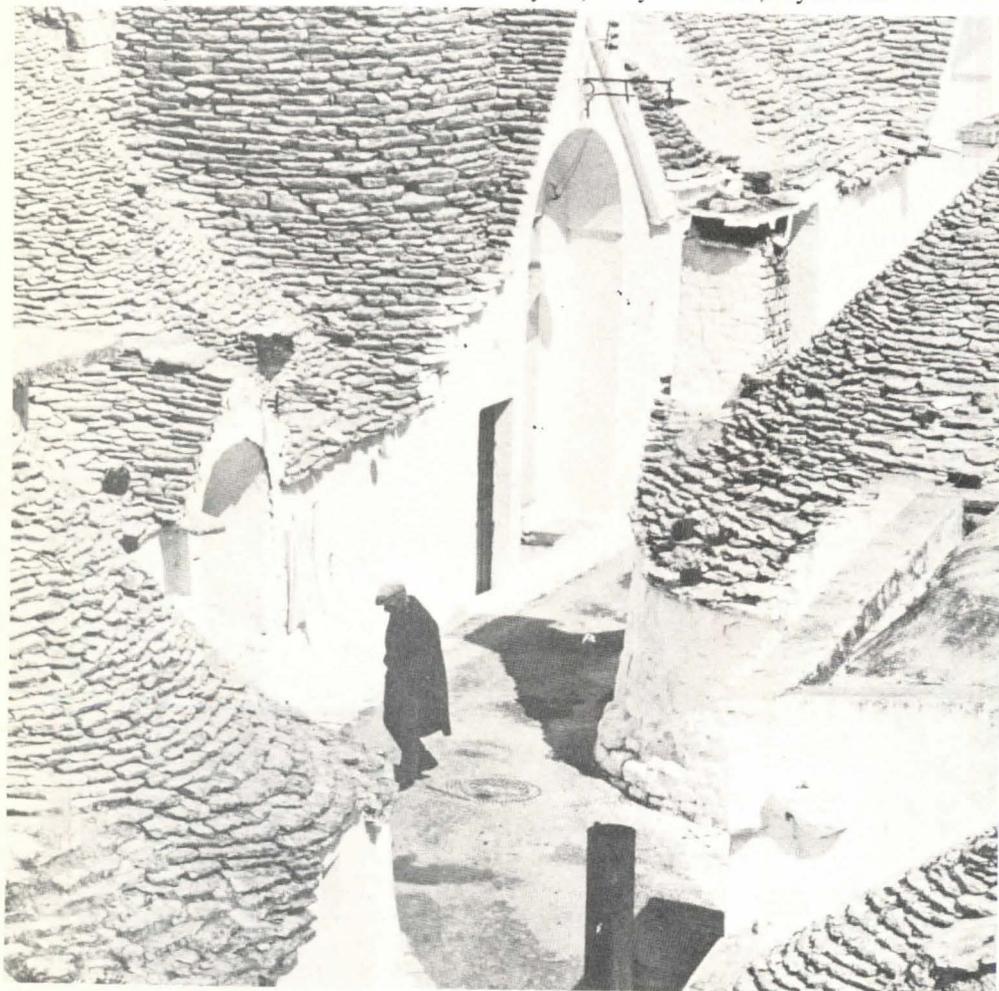
work. The drawings by Bill Turnbull are smashing." Clarke is also in agreement with Blanton on David Gebhard's *Charles F. A. Voysey, Architect*, which Clarke calls a "little beauty." His other suggestions:

The English Sunrise, Brian Rice and Tony Evans (Flash Books, 1972, \$3.95): "Perfectly reproduced color slides of the sunburst motif in British architecture and design. Real diversion, this."

Stone Shelters, Edward Allen (MIT Press, 1971, \$13.50 hardbound, \$4.95 paperbound): "Ed went to Apulia, saw the *trulli* domes, ate the seashell pasta and wrote the best travel/architecture book I've ever read."

Landscapes: Selected Writings of J. B. Jackson, edited by Ervin H. Zube (University of Massachusetts Press, 1970, \$8 hardbound, \$3.50 paperbound): "Brilliant, warm essays on the built environment. No pictures. For the thoughtful person, but very easy reading. For a slightly more esoteric and expensive gift, try volumes 1-10 of *Landscape*, the magazine that Jackson edited in the late '50s and early '60s. The essays were there first. It's \$100 from the Johnson Reprint Corp., New York City."

The Poetics of Space, Gaston Bachelard (Beacon Press, 1969, \$3.95): "Easy reading; by a European philosopher zonked out on how spaces make you feel rather than how they look."



Vernacular architecture in Apulia at the heel of Italy: "Stone Shelters."

The Shingle Style and the Stick Style: Architectural Theory and Design from Richardson to the Origins of Wright, Vincent Scully (Revised edition, Yale University Press, 1971, \$17.50 hardbound, \$6.95 paperbound): "I look at the drawings again and again. Never read it."

Sensitive Chaos, Rudolf Steiner (Anthroposophic Press, no date, \$10): "Semi-religious analysis of form in smoke, water, wood grain, clouds. An unusual and beautiful book."

Observations on American Architecture, Ivan Chermayeff and Elliott Erwitt (Viking, 1972): "A great picture book; unfortunately, out of print already."

Clarke adds other items out of print, but advises a search for them in rare and secondhand bookstores: *Isometric Section of St. Paul's*, probably drawn by R. B. Brook-Greaves (London: Architectural Press, c1928): "This drawing hangs in half a dozen architectural schools and is exquisite; the dimensions are roughly 30x15 inches"; *The Chateau of Chambord*, Gascar and Martin (Collier-Macmillan): "A lovely, lovely little book with delicious history and quotations as well as delicate color and black and white photography"; also, "any of the *Blaue Bücher* series on German folk architecture."

Clarke calls these books "dusty diamonds, golden oldies from the groveyard, early emeralds, if you will." For a

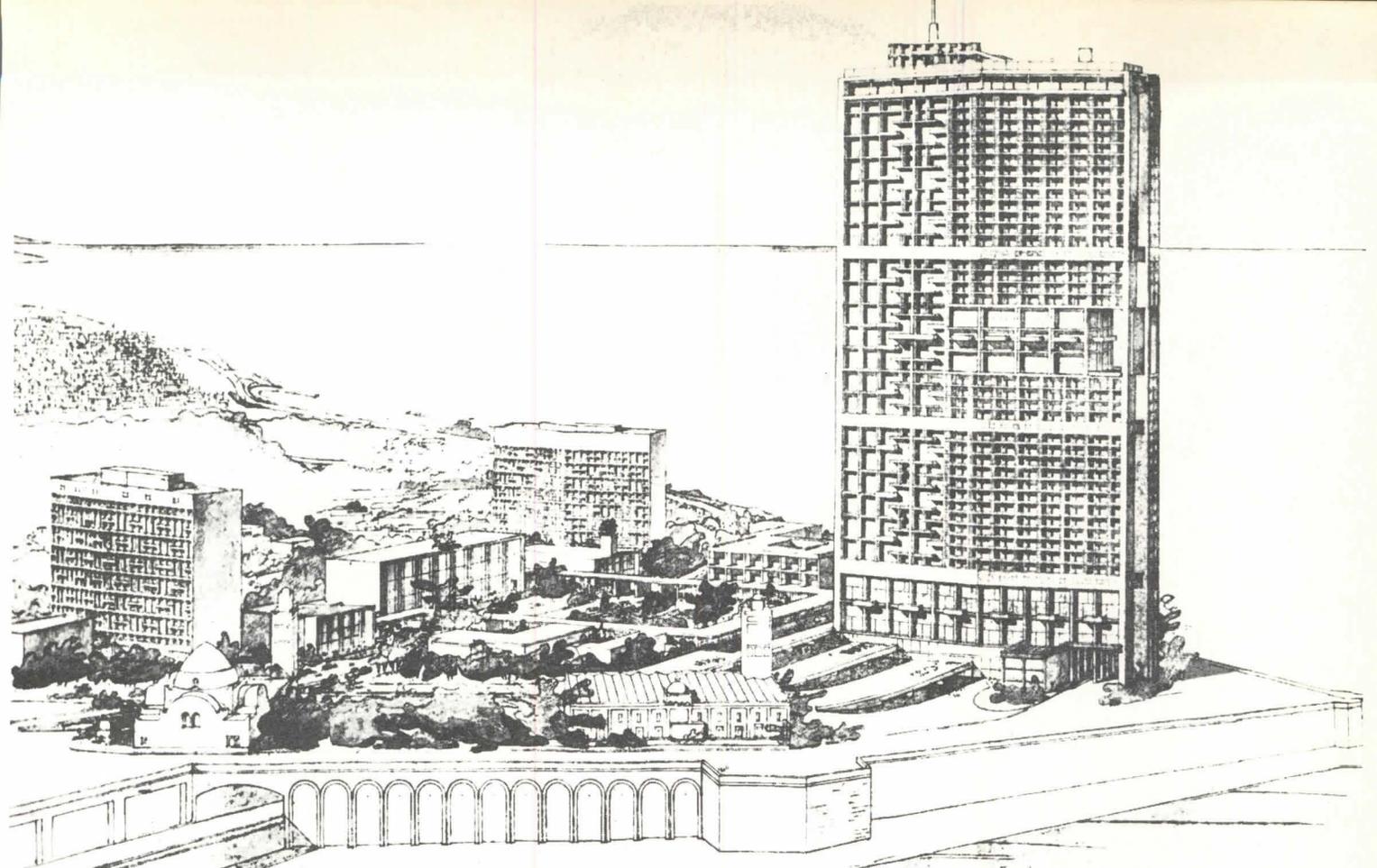
"gift of the future," he urges a subscription to the *Journal of Architectural Education*. "A pittance (\$9) will bring this sterling magazine to your loved one's door long after the tinsel of Christmas is recycled into Coors cans. Send check or money order to ACSA, AIA Headquarters Building."

Paul Thiry, FAIA, Seattle practitioner; **Paul Spreiregen, AIA**, practitioner in Washington, D.C., author of books and weekly lecturer on the National Public Radio System, and **David N. Yerkes, FAIA**, also a practitioner in the nation's capital, are all articulate spokesmen for whatever they espouse. Their lists, however, come without comment.

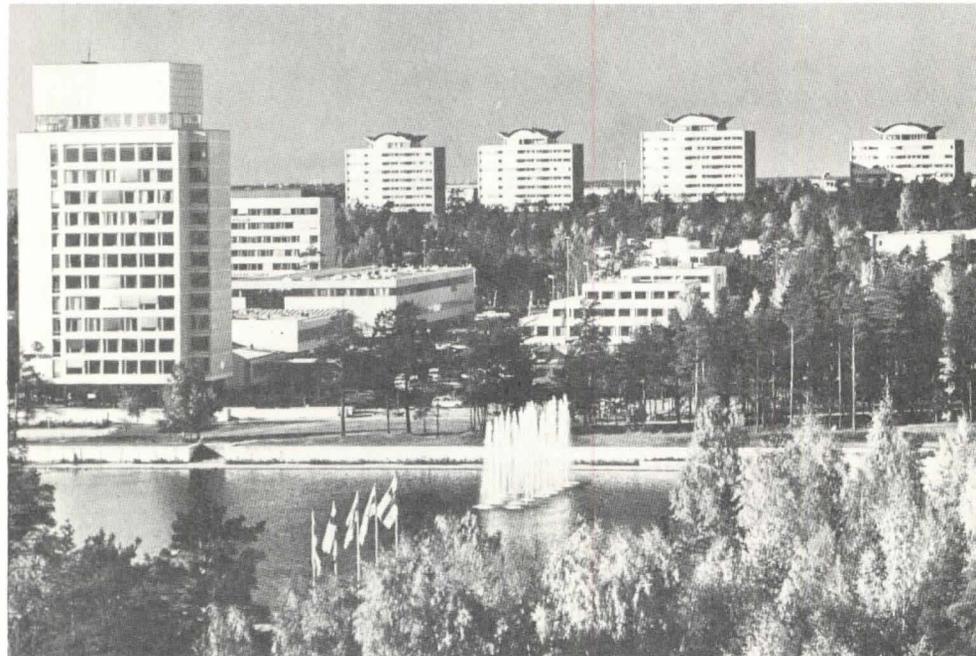
Thiry includes books that he has found "useful in furthering my vocabulary and views on architecture and planning." He suggests: *A History of Architecture*, Sir Banister Fletcher (revised edition, Scribner, 1975, \$24.95); *The Heritage of the Cathedral*, Sartell Prentice (Morrow, 1936, \$6); *Towns and Buildings*, Steen Eiler Rasmussen (MIT Press, 1969, \$3.45); *The City of Man*, Christopher Tunnard (Scribner, 1971, \$5.95); *The City, Its Growth, Its Decay, Its Future*, Eliel Saarinen (MIT Press, 1965, \$2.95); *Design of Cities*, Edmund N. Bacon (revised edition, Viking, 1974, \$20); *Jules Hardouin Mansart*, Pierre Bourget and Georges Cattani (Vincent, Freal, 1960); *Architectural Details*, Antonin Raymond and Noemi P. Raymond Architectural Book Pub. Co., 1947); *Complete Works*, Le Corbusier, edited by Willy Boesiger (Wittenborn, dates and prices of volumes vary); *The Works of Pier Luigi Nervi* (Praeger, 1957); *Frank Lloyd Wright: On Architecture*, edited by Frederick Gutheim (Grosset & Dunlap, 1960, \$2.45).

Spreiregen says that modesty prevents him from mentioning certain books, such as *Building a New Town: Finland's New Garden City, Tapiola*, by Heikki von Hertzen and Paul D. Spreiregen (MIT Press, 1971, \$17.50 hardbound, \$5.95 paperbound); *On the Art of Designing Cities: Selected Essays of Elbert Peets*, edited by Paul D. Spreiregen (MIT Press, 1968, \$17.50) and *Modern Metropolis, Its Origins, Growth, Characteristics and Planning: Selected Essays of Hans Blumenfeld*, edited by Paul D. Spreiregen (MIT Press, 1967, \$12.50).

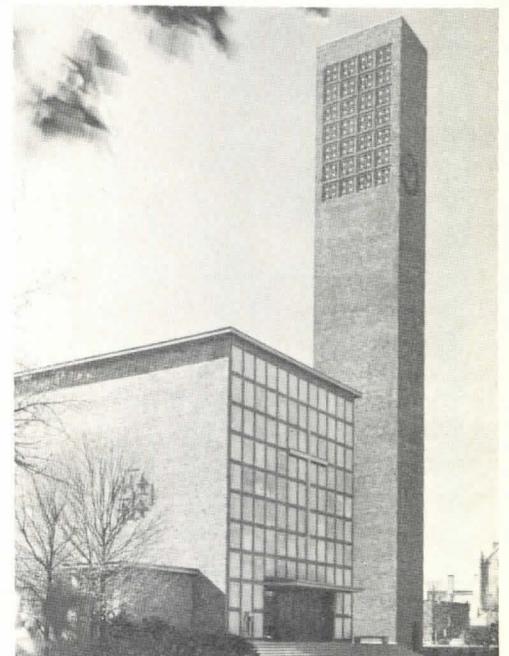
What he does suggest, then, are these books: *The Language of Cities*, Charles Abrams (Viking, 1971, \$10); *Golden Ages of the Great Cities*, edited by Sir Ernest Barker et al. (Thames & Hudson, 1952); *Vauban*, Michel Parent and Jacques Verroust (Jacques Freal, 1971); *Planning Jerusalem: The Master Plan for the Old City of Jerusalem and Its Environs* (McGraw-Hill, 1974, \$25); *Roots of Contemporary American Architecture*,



Marine Quarter, Algiers, an urban solution integrated into the 1942 master plan: "Complete Works," Le Corbusier.



As towns should be: "Building a New Town, Finland's New Garden City, Tapiola."



A landmark: "Columbus, Indiana."

edited by Lewis Mumford (Dover, 1972, \$7.50); *International History of City Development*, E. A. Gutkind (8 volumes), Free Press, dates vary, \$25 each); *Les Hauts et les Bas*, Sempé (a book of environmental cartoons, Denoël, 1970).

Yerkes has three books to commend: *Observations on American Architecture*, Ivan Chermayeff and Elliott Erwitt (Viking, 1972); *Heavenly Mansions*, John N. Summerson (Norton, 1963, \$2.10), and *Columbus, Indiana: A Look at Architecture* (Columbus Visitors Center, 1974, \$5).

The reader who's been keeping tabs on these titles may be surprised that no books

enjoy an overwhelming majority of "votes." Are there no seminal books on architecture and its related disciplines that immediately leap to mind as natural candidates on such lists? If there are, why didn't the respondents list them with a majority vote?

We've put these questions to several people who did not participate in this informal undertaking, and replies have been unanimous from architects and nonarchitects alike: Architects are highly individualistic people who have catholic and wide-ranging interests that are revealed in an array of books considered worthwhile

enough to be a gift to a colleague or friend.

The pattern—or lack of pattern—which prevails in these lists leaves the definite impression that architects are avid readers of many kinds of books. Perhaps the variety reflects the realities of the architect's profession. He has the task of integrating a tremendous amount of new knowledge from a number of perspectives in order to be informed about many problems. Perhaps more than any other profession, architecture is interdisciplinary—and interdisciplinarity demands the mastery of many works of the mind. *Mary E. Osman*

The Beaux-Arts: A Reconsideration Of Meaning in Architecture

John Lobell

Last month, the Museum of Modern Art in New York City mounted a show on the American and French Beaux-Arts tradition in architecture. A series of recent circumstances has aroused a renewed interest in the Beaux-Arts tradition, among them the failure of the International Style (or European modern movement) to provide a satisfactory urban environment, the analysis of meaning in architecture made possible by semiology, and the realization that Louis Kahn was as much a Beaux-Arts architect as a participant in the European modern movement.

American architecture over the past 100 years has been dominated by four distinct schools: "organic" as represented by Furness, Richardson, Sullivan, Wright, Goff and Soleri; "steel frame" as represented by Jenney, Burnham & Root, Adler & Sullivan, Mies and Skidmore; "Beaux-Arts" as represented by McKim, Mead & White, Burnham, Cret and Kahn;

John Lobell is an assistant professor at the Pratt Institute school of architecture in Brooklyn.

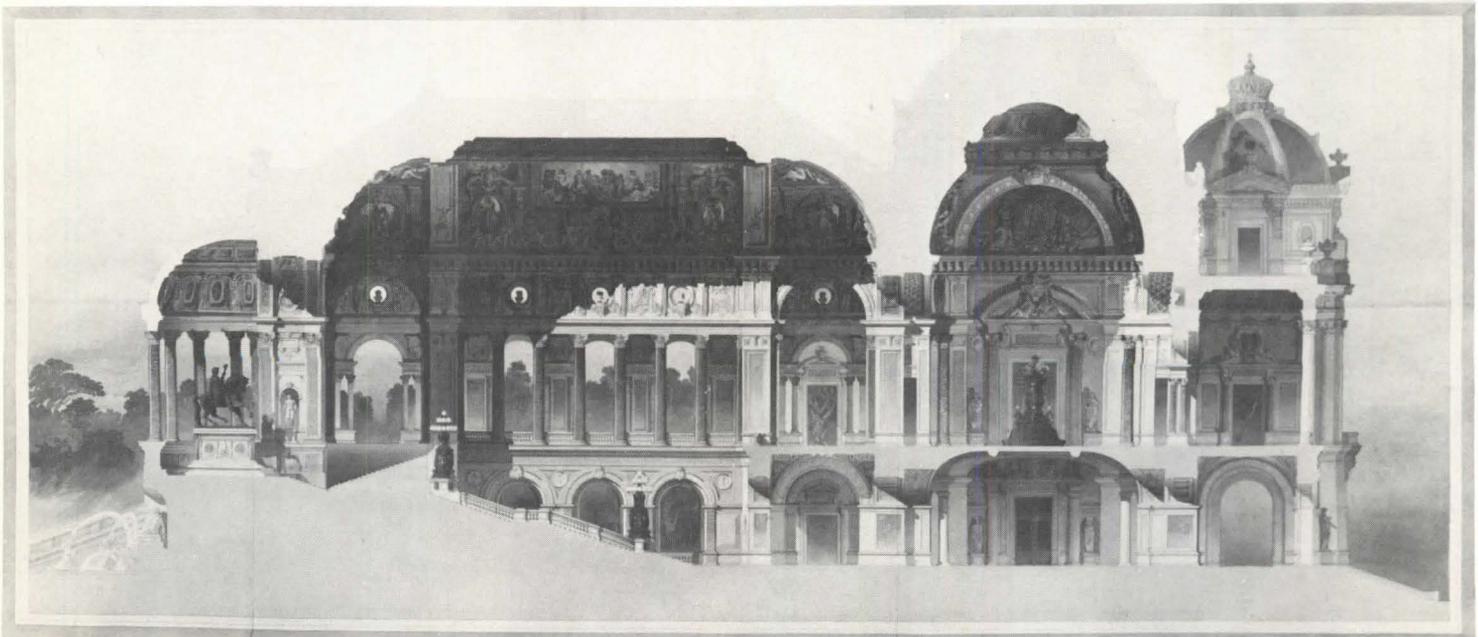
and "European modern" as represented by Mies, Gropius, Breuer, Franzen, Johnson, Johansen, Rudolf and the Five. This article is concerned with the last two, the Beaux-Arts and European modern. (I am using the term "European modern" as somewhat more inclusive than "the International Style," which would be too narrow, and "modern," which would include Frank Lloyd Wright and be too broad. European modern refers to the European tradition crystalized at the Bauhaus and imported to the United States in the late 1930s and early 1940s when Mies became dean at the Illinois Institute of Technology and Gropius and Breuer came to Harvard.)

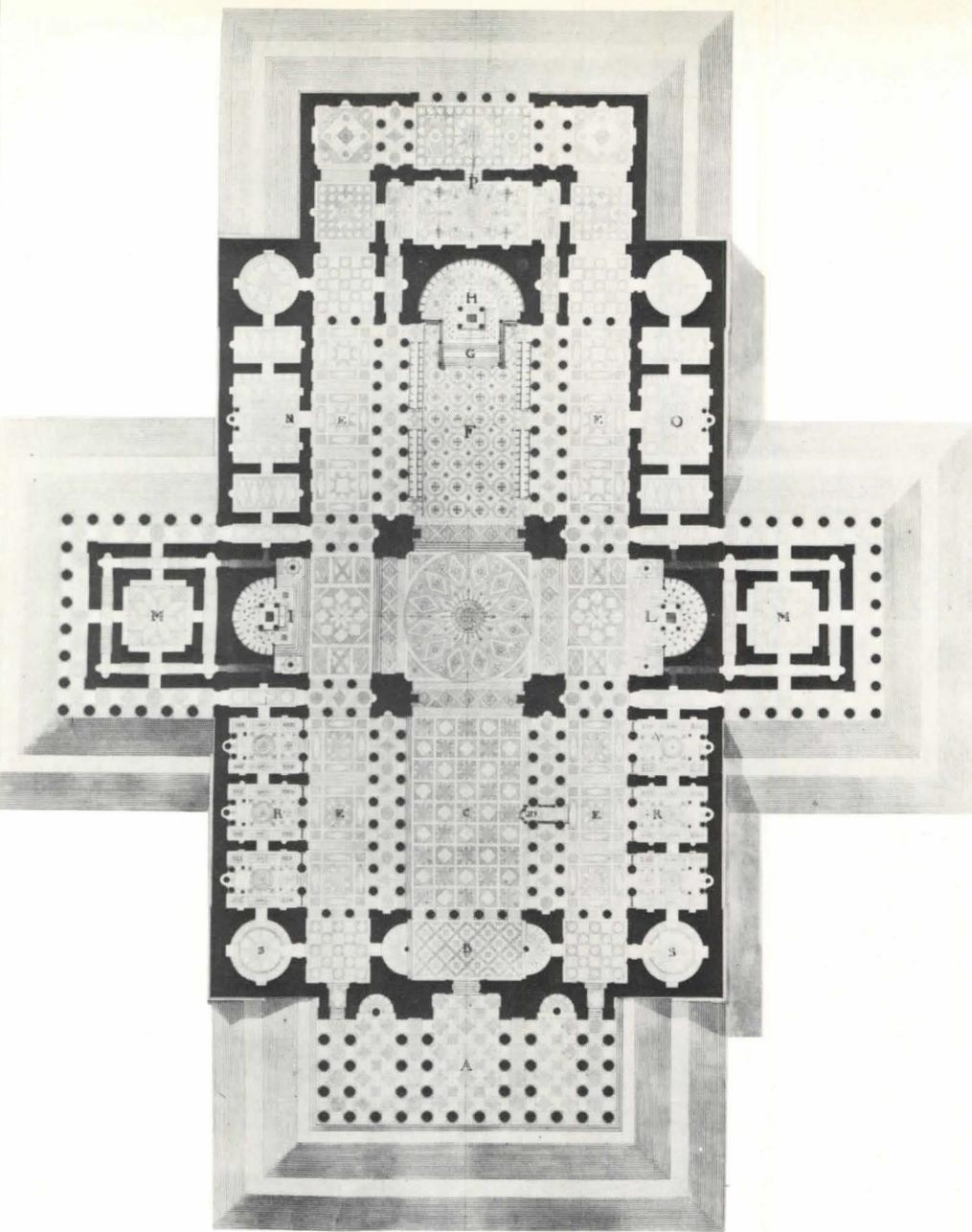
While actually a system of education based on competitions and practiced in the U.S. and France until the 1940s, Beaux-Arts architecture is most widely identified with its style, specifically the use of the classical orders, monumentality and symmetrical plans. The European modern movement rejected those orders as reflective of a culture which had died (despite political attempts to sustain the "Roman

Empire" up until World War I); it rejected monumentality as inappropriate to democratic society; and it rejected the symmetrical plan as reflective of social and spatial concepts which were also outdated. (In this, the European moderns were not original. One of the major sources for their stylistic directions was Frank Lloyd Wright, who had come to similar conclusions a decade earlier.)

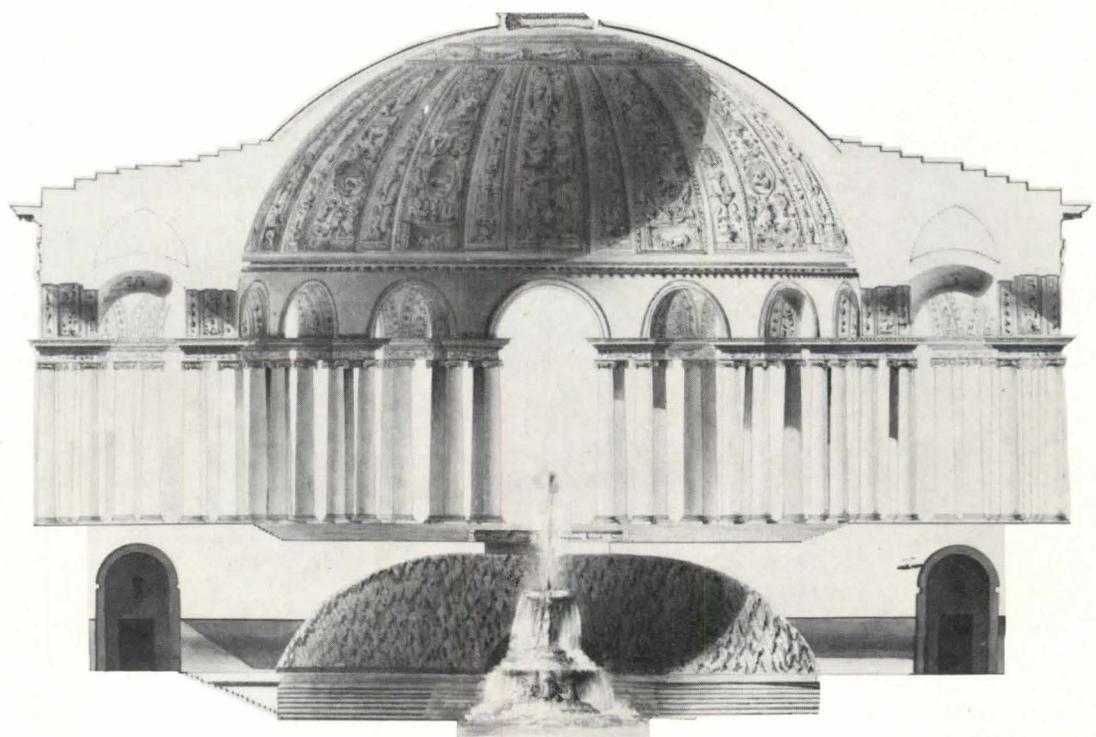
But what we are beginning to realize today is that the differences between the Beaux-Arts concept of architecture and the European modern concept are far deeper than either style or organization of plan. The differences lie in two fundamentally different approaches to what architecture is all about and, therefore, to what humanity is all about. This difference is evident in both methods and the values of the two systems, but might most clearly be seen in the attitudes of the two movements towards "functionalism."

The European modern concept of functionalism (expressed today as "defensible space," "close fit" and "user needs") was very simplistic. There is a physical need,

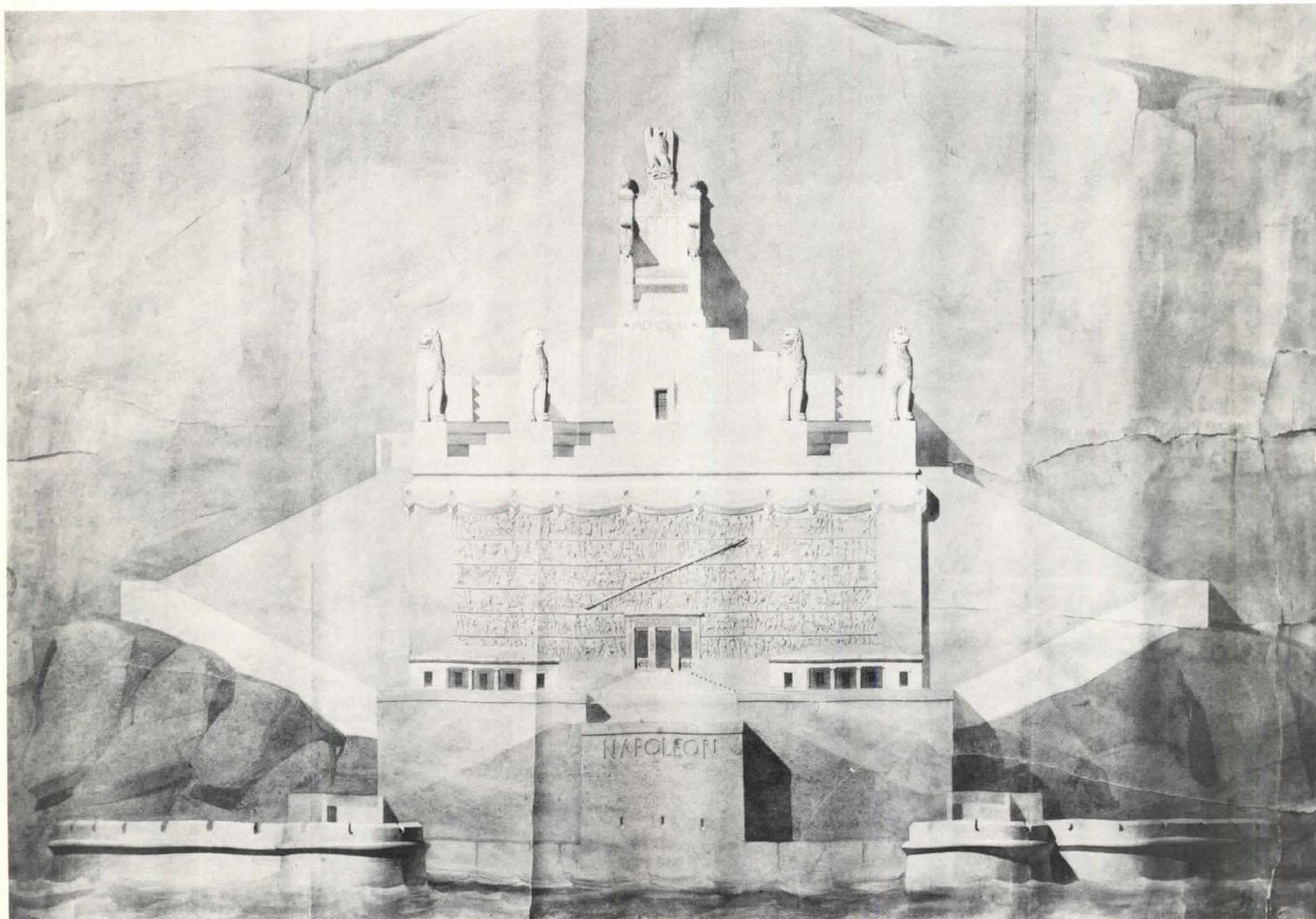




The illustrations on these and the following pages were chosen by the author from the more than 150 original drawings by students of the Ecole des Beaux-Arts which, with photographs of buildings of the period, comprise the current Museum of Modern Art exhibition. Bottom left, "Principal Staircase of the Palace of a Sovereign," Emmanuel Brune, 1863. Left, cathedral church, Andre-Marie, Chatillon, 1809. Below, "Menagerie of a Sovereign," Charles Percier, 1783.



'The Beaux-Arts approach was a three-step process: form-function-meaning.'



Above, "Monument to Napoleon," Gabriel-Auguste Ancelet, 1849. Right, "Water Circus," Victor Baltard, 1830.

let us say, to get a group of people from one place to another. A "corridor" was designed, its width determined by the maximum number of people, its height by lighting and ventilating needs and a desire to avoid a closed-in feeling, and that was it. Anything else, such as a vaulted ceiling could not be "functionally" justified and was not permitted.

Thus, the European modern movement saw a two-step closed circular process: function-form. The function generated the form, and the form in turn served and influenced the function.

Semiological investigations (particularly Umberto Eco) have shown the inadequacy of that analysis. There is a necessary intervening step: the communication

of meaning. Thus a form cannot permit a function until it communicates to the user what function is intended. We have to recognize the intent of a door as well as being able to physically fit through it. The European moderns attempted to deny this step and thereby assume the human being to be an automaton. If a person could fit through a door, that was enough. All social, cultural, historical or personal associations which might come with going through a door were denied. Alienation from modern architecture was an obvious consequence.

The Beaux-Arts approach to function was very different. It was a three step circular process: function-form-meaning. Thus the function generated a form which

in turn communicated the *meaning* of the function, as well as facilitating it. Both form and meaning then influenced the function. Given the same problem of getting people from one place to another, the Beaux-Arts architect would not only want to provide sufficient width for people to comfortably pass through, but would also ask where they were coming from and going to. If they were moving from one classroom to another in a school, the *meaning* of the experience might be quite different than if they were moving from one hall to another in a museum.

To convey these different meanings, the Beaux-Arts architect would select from different orders, different forms of ceiling vaulting and different forms of lighting in

order to convey difference in scale, formality, intimacy, etc., of the experience. The result might be a width or height far greater than that needed for efficient passage of a given number of people. That additional height or width would be to communicate an attitude about the experience, rather than just simply permit the activity.

Kahn was similarly interested in meaning. In relation to understanding a chapel, he said that first you have a sanctuary, and the sanctuary is a place for those who want to kneel. Around the sanctuary is an ambulatory, and the ambulatory is for those who want to be near. Outside the ambulatory is a court for those who want to feel the presence of the chapel. And the court has a wall. Those who pass the wall just wink at it. This contrasts with Mies's chapel at IIT done as universal space. His chapel is essentially the same as his art and architecture school, his auditorium, his museum, and the Bohack supermarket on Long Island done by Skidmore in Mies's style. Kahn's chapel would com-

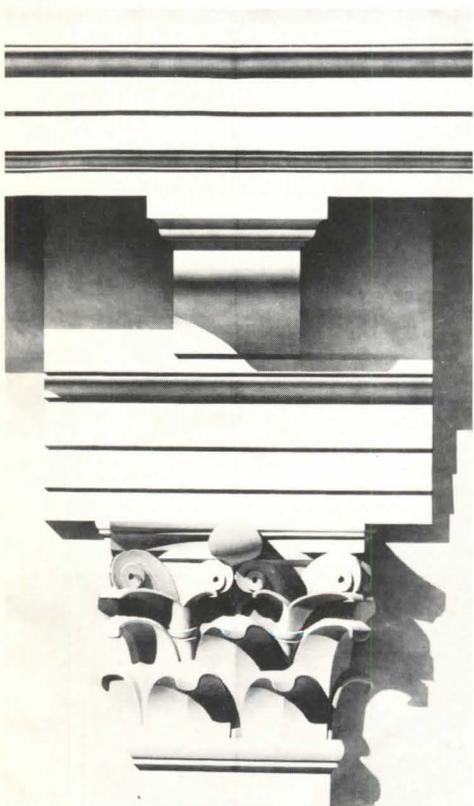
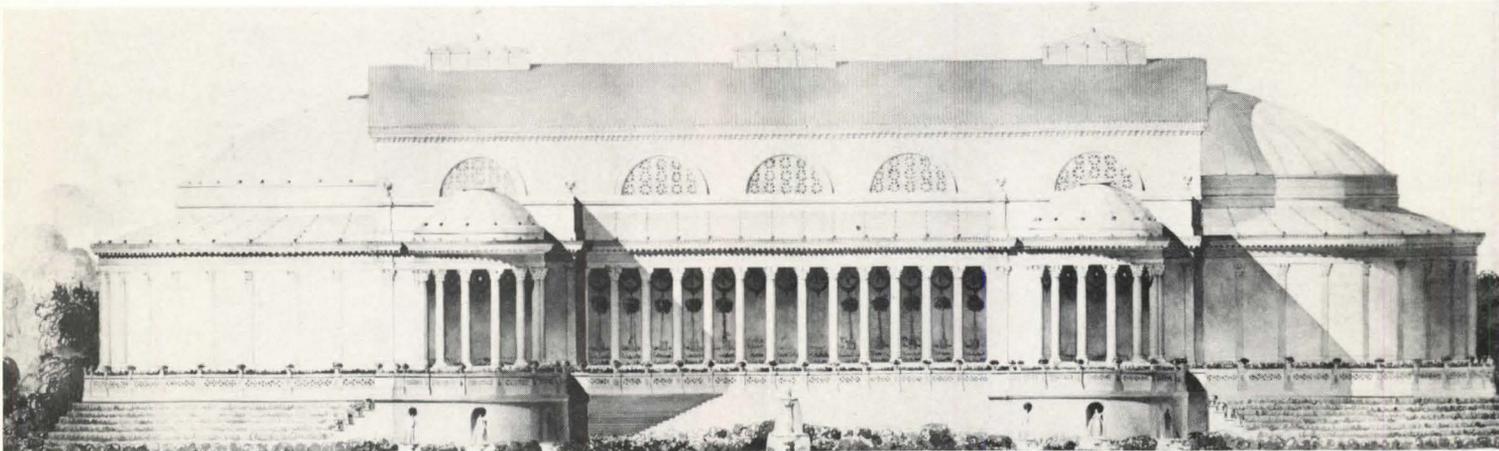
municate the meaning of the place. Mies's looks for a "universality" beyond meaning.

The Beaux-Arts system considered architecture to be the ordering of archetypal spaces to espouse and encourage institutional and individual values. The European moderns considered architecture to be nothing more nor less than the solving of stated functional problems. The Beaux-Arts collapsed because the values it espoused had become outdated. However, that does not mean that architecture must be value-free. Today, we realize that the attempt of the European modern movement to be value-free has led to the pervasively sterile, alienating, inhuman and ultimately uneconomical and anti-ecological environment so clearly identified with modern buildings.

Their fundamentally different attitudes towards value are evident in the educational systems of the two different movements, particularly in the teaching of history. In the Beaux-Arts education, history was integrated into the curriculum. It was taught by architects and was not only a study of the past, but also a study of the elements (orders, building types, columns, vaults, details, etc.) which the students would be using in his or her own building. These elements were also known and understood by the public as well as by architects as they were taught in elementary schools. By contrast, the Bauhaus forbade the teaching of history, wishing to make a complete break with the past. When history was reintroduced in the American offsprings of the Bauhaus (Harvard and IIT), it was taught by art historians and was unrelated to anything else the student did. The intention was, of course, to generate a new architecture based purely on function and on the methods of making buildings, an esthetic borrowed from engineering. However, the



Kahn retained 'the use of form to celebrate meaning and value.'



human being remained more complex and historical than the proponents of European modernism had expected, and this severing of history never took hold with the public. The only people who bought it were the bureaucrats who saw it fitting their purposes in making office buildings and public housing.

By the late 1950s, the sterility of the European modern or International Style glass box or white box approach to architecture had become apparent. Many of the early attempts to break out of the box now look pathetic and ultimately thin.

By the early 1960s, the work of Louis Kahn began to show workable alternatives. Kahn's architecture succeeded in regaining a solidity which had been absent earlier. It is now apparent that this "solidity" is not due merely to the use of masonry, but more to the reintroduction of *meaning* in architecture. Kahn did not design from the functional requirements of the program, but rather asked, "What does this building want to be?" Functional requirements of the program were not merely to be accommodated, but rather to be translated into meaning and then celebrated in form.

Kahn had managed the transformation which had eluded the Beaux-Arts earlier. He had abandoned the outmoded symbol

system of the classical orders but had retained the use of form as a means of celebrating meaning and value, not just expressing function. In so doing, he opened the way for contemporary architecture to progress in a way more fully integrated with our culture. As a matter of historical interest, he also opened a more meaningful study of the Beaux-Arts movement.

The modern movement is now under intense appraisal. In looking at New York City, we find three urban complexes immensely successful on every level. Despite all the rhetoric from the European modern movement about functional urbanism, and the esthetic of the machine, it is Penn Station, Grand Central Station and Rockefeller Center, which are functionally, urbanistically, and in terms of transportation, the most successful projects in New York. *All three are Beaux-Arts schemes.*

Today, the most vital explorations in architecture are all in the direction of meaning, exploring the avenues reopened by Kahn and later Venturi. Whereas Kahn reintroduced meaning from history, Venturi reintroduced meaning from everyday life. A pitched roof is generally associated with a house, so when Venturi designed his mother's house, he took advantage of that association, rather than

Left, "Winter Garden," Francois-Louis Boulanger, 1835. Bottom left, capital detail, Louis Duc, 1829. Right, detail of a project for restoration of the Parthenon, Edouard Loviot, 1881.

denying it, and made a pitched roof. Venturi's pitched roof was distorted, in order to generate a discontinuity with the association and thereby make his own comment, but it is still recognizable as a residential pitched roof.

Graves has taken some of Venturi's literary ideas further, and Stern has extended his historical association. Eisenman is interested in the structure of language and deliberately avoids content. Giurgola is working with many of Kahn's ideas. Mimi Lobell is exploring the mythological potential of architectural meaning. In abandoning the Beaux-Arts, we abandoned a rich vocabulary of human meaning. The classic orders referred to masculine and feminine forces; to the human institutions of religion, community and government, and to a considered sense of place. Dealing with these issues through a Beaux-Arts vocabulary would not be appropriate today, but that does not mean a new vocabulary cannot be generated. When the forces of the unconscious could no longer be expressed through the gods, the vocabulary was reestablished in terms of psychology. The European modern movement sought to eliminate meaning itself from architecture. Today, the concern is to reestablish meaning in new vocabularies. □



Recent Space: A Typology

Anthony C. Antoniadis, AIA

Recently, architectural space has evolved unburdened by the static two-dimensional handicaps of the past; new three-dimensional interpretations are now at hand. A new architecture of spatial dynamism is available—there are numerous buildings to prove it—suggesting that the spirit of space-making is at work and thriving.

It is ironic that when many of the great space-makers of today are questioned about space, they claim ignorance, state personal doctrines or become totally incomprehensible. When Philip Johnson was asked a question during an interview about scale as a major space component, he replied: "We don't know what that is, do we?" It could be argued also that I. M. Pei, an advocate and creator of spatial monumentality, professes the doctrine of simplicity as his sole didactic answer to space issues. Louis I. Kahn, the most esoteric space-maker of recent times, always made himself almost unintelligible because of his poetic ambiguity. Paul Rudolph, obviously the most prolific space-maker on the contemporary architectural scene, seems to fortify the secrets of the art by being totally "metamorphic" when he discusses the spatial principles of his design schemes.

Perhaps such attitudes are indicative of the sacredness of the word and concept of "space" in the minds of the great masters. I am inclined to believe that Le Corbusier's emphasis on the importance of the plan to the neglect of the importance of the space-maker section was rooted similarly in his attitude about the sacredness of "space." In spite of his reverence of the ancient Greeks, rather than the space-maker Romans, he ended up an undeniable space-maker himself, a Greek and Roman at the same time.

The sections of Corbu's buildings reveal unsurpassed interior enclosures. Perhaps it was his ability with sketches of spatial fragments which made him neglect, in his discussions, the importance of his sections and the glorification of the plan. Also he never taught architecture formally

Mr. Antoniadis, associate professor of architecture and director of environmental studies at the University of Texas at Arlington, is also a practicing architect.

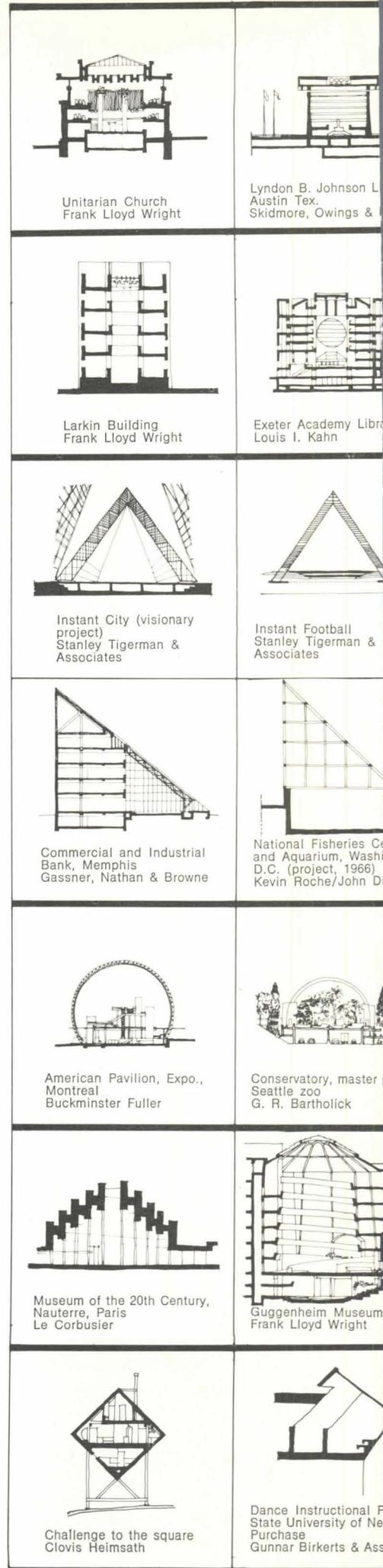
and never had to analytically systematize applied design terms, thus revealing the secrets of his space-making process. Finally, it could have been his obstinate reaction to the cubists who, although nonarchitects, were the first to suggest the time element in the representation and appreciation of space.

I submit that recent American architecture has been influenced by the currents of three spatial heritages: 1) the heritage from Frank Lloyd Wright; 2) the heritage from Mies van der Rohe, and 3) an amalgamation of these two, with Bauhaus disciplines and influences by Corbu as catalysts. The works of Paul Rudolph and his followers are representatives of the third category, and the great bulk of contemporary architectural space-making occupies the grand category of the second.

Wright experimented with space throughout his career. He enclosed space, hollowed it out and moved man within it by moving the space accordingly. Wright, as a space-maker, has been compared with Roman architects, but unlike them he never created static enclosures. On the occasions when he used symmetrically static sections, he was always able to animate them with the movement of people inside. For that purpose, he introduced the ramp, as in the Morris Shop in San Francisco and the Guggenheim Museum in New York City.

Wright worked with nearly all possible sectional configurations: squares, rectangles, triangles and even circles and curves. He was never able, however, to achieve great spatial wholes with circles and curves, which he did so successfully with the use of simpler geometries. Examples of Wrightian universal space, which set the pace for contemporary American architecture, are seen in the Unitarian Church (square); the Larkin Building (rectangle); the Guggenheim Museum (trapezoid), and numerous residences which combined space shapes.

Wright's prolific and never-ending search for a spatial vocabulary has been replaced today by the preoccupations of Paul Rudolph. His works can be classified in the most complex category of space-making: one that has digested the Wrightian heritage, has been influenced by



Unitarian Church
Frank Lloyd Wright

Lyndon B. Johnson L.
Austin Tex.
Skidmore, Owings &

Larkin Building
Frank Lloyd Wright

Exeter Academy Libr
Louis I. Kahn

Instant City (visionary
project)
Stanley Tigerman &
Associates

Instant Football
Stanley Tigerman &
Associates

Commercial and Industrial
Bank, Memphis
Gassner, Nathan & Browne

National Fisheries Ce
and Aquarium, Washi
D.C. (project, 1966)
Kevin Roche/John D

American Pavilion, Expo.,
Montreal
Buckminster Fuller

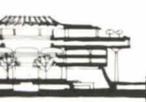
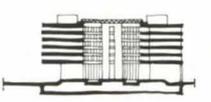
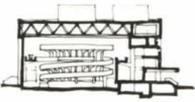
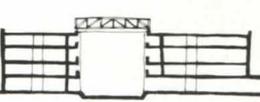
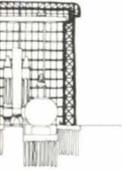
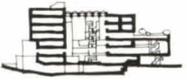
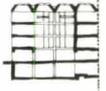
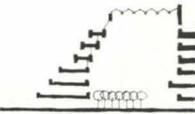
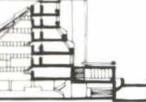
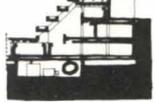
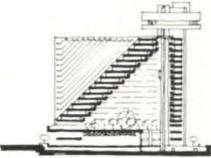
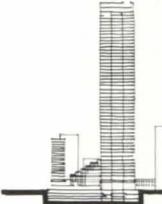
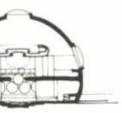
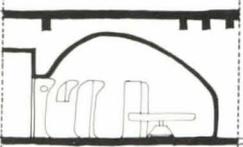
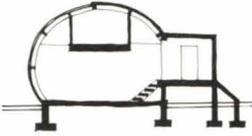
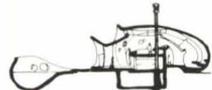
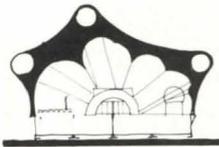
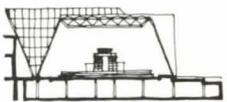
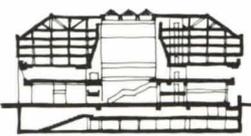
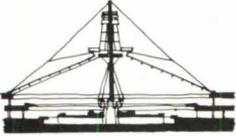
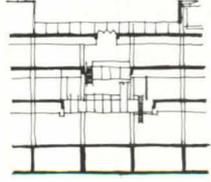
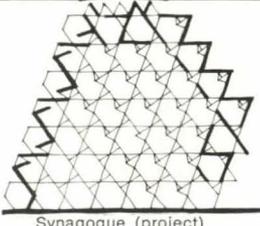
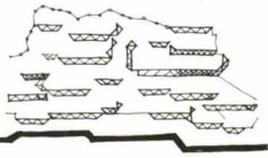
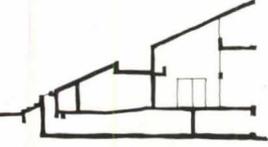
Conservatory, master
Seattle zoo
G. R. Bartholick

Museum of the 20th Century,
Nauterre, Paris
Le Corbusier

Guggenheim Museum
Frank Lloyd Wright

Challenge to the square
Clovis Heimsath

Dance Instructional F
State University of Ne
Purchase
Gunnar Birkerts & Ass

 <p>Illinois State Capitol Carl Warnecke & Associates and Belt, Johnson & Lo</p>	 <p>Boise Cascade Home Office, Boise, Idaho Skidmore, Owings & Merrill</p>	 <p>New England Aquarium Cambridge Seven Associates</p>	 <p>Yale Center for British Art and British Studies Louis I. Kahn</p>	 <p>Apparel Mart, Dallas Pratt, Box & Henderson</p>	<p>SQUARE APPROXIMATION</p>
 <p>Head test facility</p>	 <p>"Student Street," University of Alberta Richards & Berretti</p>	 <p>Miami-Dade Community College downtown campus Ferendino, Grafton, Spillis & Candela</p>	 <p>Yale Center for British Art and British Studies Louis I. Kahn</p>	 <p>Children's Hospital of Philadelphia Harbeson Hough Livingston & Larson and William A. Ament</p>	<p>RECTANGLES</p>
 <p>Faculty Building at Stirling</p>	 <p>Solar energy as genesis of triangle</p>	 <p>Boston Airport addition Kubitz & Pepi</p>	 <p>Graduate School of Design, Harvard University John Andrews</p>	 <p>Regency Hyatt Hotel, San Francisco John Portman & Associates</p>	<p>TRIANGLES</p>
 <p>Buenos Aires School of Flora Manteola</p>	 <p>Battery Park City, New York City Wallace K. Harrison</p>	 <p>The Orangerie (project, 1968) Kevin Roche/John Dinkeloo</p>	 <p>Irwin Union Bank and Trust addition Kevin Roche/John Dinkeloo</p>	 <p>I.D.S. Center, Minneapolis Philip Johnson</p>	<p>TRIANGLES</p>
 <p>House project in Goff</p>	 <p>Egg-shaped operating room Paul Nelson</p>	 <p>Woolner residence Anne and Tony Woolner</p>	 <p>Spray form house John Johansen</p>	 <p>Pneumatic structure Yutaka Murata</p>	<p>CIRCLE/CURVES</p>
 <p>Texas State Health Management Center Berg, Delony & Johnson</p>	 <p>North edge, Metropolitan Museum of Art, New York City Kevin Roche/John Dinkeloo</p>	 <p>Addition, Public Library, Boston Philip Johnson and John Burgee</p>	 <p>Town East, Dallas Harrell & Hamilton</p>	 <p>Galleria Post Oak, Houston Hellmuth, Obata & Kassabaum</p>	<p>TRAPEZOIDS</p>
 <p>Curtain project, Chicago Christo Javachef</p>	 <p>Synagogue (project) Alfred Neumann and Zvi Hecker</p>	 <p>Control and choice, 1967: an environment of responsive systems Archigram</p>	 <p>National Park headquarters building Romaldo Giurgola</p>	 <p>Price house and clubhouse (1965 project) Bruce Goff</p>	<p>INTER-PENETRATION</p>

Corbusian examples and has adopted in three dimensions the Miesian principles of two-dimensional universality. Rudolph's spaces have an "oceanliner continuity." The sections of his office in New York City (demolished in 1968) and the Hirsch house, also in Manhattan, set the rules of the "combinational" contemporary space explosion. He makes use of different ceiling heights and different levels, free-standing bridges and natural lighting through evolving clerestories, resulting in a first degree of transparency, permitting a simultaneous perception of different spatial locations and animating the whole interior.

The strength of the oceanliner continuity depends upon the interlocking of the volumes of air which are defined by the horizontal and vertical "transparencies." The point of interlocking represents the universal space of that part of the interior. There are numerous interlockings in the architectural sections of this type.

The issue of quality now becomes one of discipline. How many interlockings? Of what configuration? How big? Spaced how far apart? These questions are difficult to control and master; time and effort are required to achieve the correct space in the decision-making process. As a result, not every architect succeeds in using this combinational vocabulary, and many works appear undisciplined, uncontrolled, often chaotic.

Perhaps these difficulties have led other architects to follow the more straightforward vocabulary of Mies van der Rohe. Mies once said: "I do not want to be interesting; I want to be good." This statement, in a way, summarizes the whole range of today's professionalism, explaining the fact that many larger firms side with Mies rather than following the spatial extremes of Wright and Rudolph. This ideological choosing of sides is enforced by the economic benefits permitted by the linear straightforward simplicity of Miesian designs.

The spaces depicted here that are labeled "contemporary sublime" clearly have resulted from economic considerations. Whether it was a belief in a philosophy or whether it was an economic act that eventually produced the space, the fact is that the spaces are now *there* and should be evaluated for their effect upon man. Squares, rectangles, triangles and trapezoids represent the key geometric abstractions of the majority of the bolt architectural sections of this decade.

It is evident that no sophisticated structural systems have been used in this decade for the universal spaces of multifunctional buildings. Architects seem satisfied with the old post and beam and its basic variations as a way of enclosing space. Shells or more sophisticated structural systems are absent in large-scale

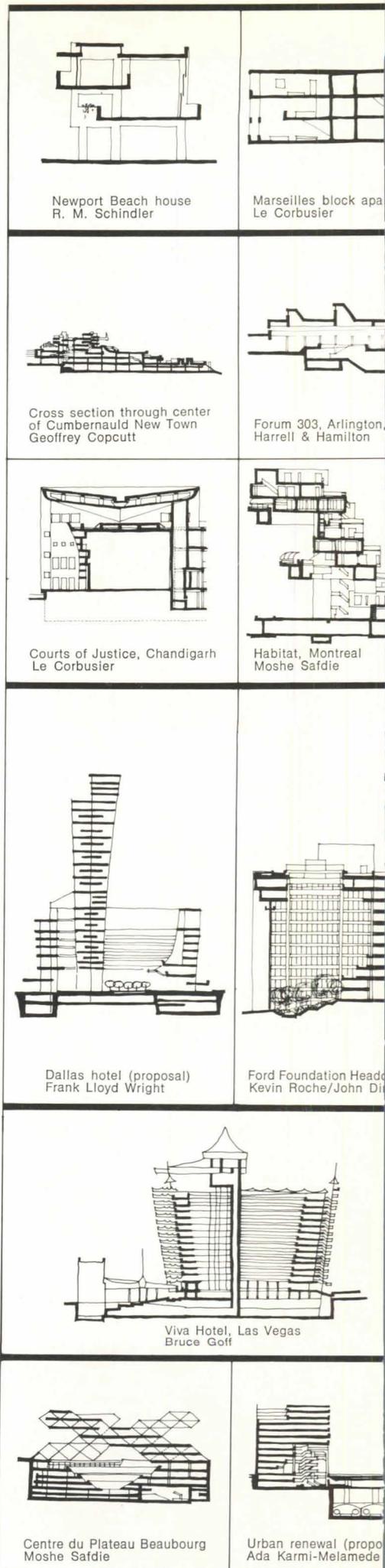
multifunctional examples. In the circle and curve category there are some basic shell suggestions for some simple-function buildings. Inflatables and tensile structures, inappropriate now for multistory functions, represent extravagant exceptions. Thus great architectural complexity and interior appeal have been achieved by means of economical, well-modulated structural organization. This simple and logical structural clarity is the key to the appreciation of most of the great spaces of contemporary architecture.

In the Bauhaus/Miesian and Corbusian sense, the architect designed his structure from the plan upward. Plans and development of plans first, then sections, then elevations and, finally, a presentation perspective. All this is changing. Better spaces are the product of a design methodology which transcends a static two-dimensional discipline. It suggests that the designer check his decisions at any stage of the decision-making process through all the necessary documents and that he use every available tool to describe the design spatially in plans, sections, elevations, in sketches of spatial fragments and in spatial models. If design alternatives change, so must all plans, all sections, all elevations and the spatial model.

Architectural historians and critics often preoccupy themselves with the tools of architectural communication, attributing spatial conceptions to innovative communications facilities. Sometimes, these nondesigner historians are overly romantic, fascinated by media whose skills they did not master. Bruno Zevi is a critic who has suggested the ability of the movie camera to make space appreciation possible in a cubist sense. Indeed, the camera is often used by practitioners and students, but movies are only useful for presentation purposes. As every designer of caliber knows, the tools of creative design are sketching and drafting.

I suggest that unlike the false possibilities of the Renaissance perspective, the passive possibilities of the movie camera and the misunderstood possibilities of passive experimental totality of the environmental psychologists that the architect use the three traditional tools of communication: plans, sections and elevations in simultaneous consideration with sketches of spatial fragments and working models to check his design decisions.

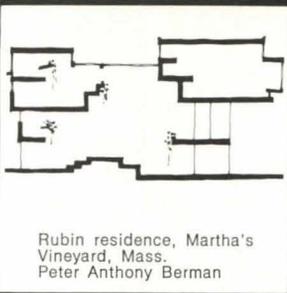
In any good architect's life there comes the moment of spatial "revelation." In this moment, he finds himself in the interior space of his imagination. Scale, color, texture—reality—all are there. The space is real in his mind, and it will be real when it is built. This is why such privileged architects do not require all the documents to communicate a space idea to a fellow professional. A quick and well-proportioned conceptual section is enough to communicate his ideas. □



**CHALLENGE
TO THE SQUARE**



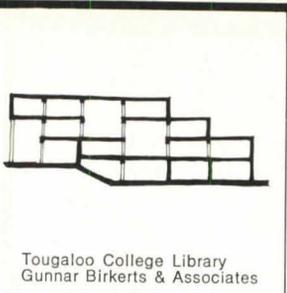
Rudolph's office,
New York City
Paul Rudolph



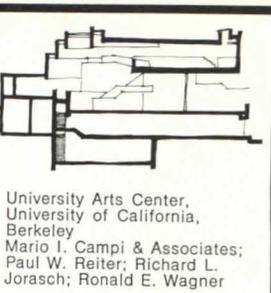
Rubin residence, Martha's
Vineyard, Mass.
Peter Anthony Berman



Olivetti complex, Tokyo
Kenzo Tange



Tougaloo College Library
Gunnar Birkerts & Associates

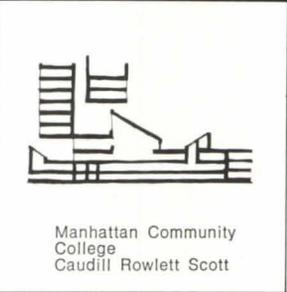


University Arts Center,
University of California,
Berkeley
Mario I. Campi & Associates;
Paul W. Reiter; Richard L.
Jorasch; Ronald E. Wagner

**COMBINATIONS
OR THE OCEANLINER CONTINUITY**



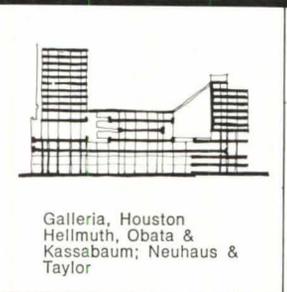
Garage Office, Chicago
Hick & Nagle



Manhattan Community
College
Caudill Rowlett Scott



Mall, Columbia New Town
Cope & Lippincott



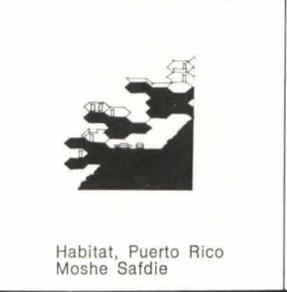
Galleria, Houston
Hellmuth, Obata &
Kassabaum; Neuhaus &
Taylor



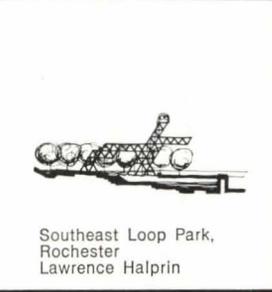
Mix-use development, Boston
Cambridge Seven Associates



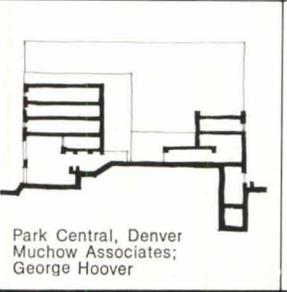
Garden Mile, Singapore
Design Partnership of
Singapore Architects



Habitat, Puerto Rico
Moshe Safdie



Southeast Loop Park,
Rochester
Lawrence Halprin

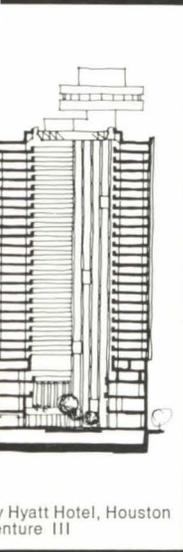


Park Central, Denver
Muchow Associates;
George Hoover

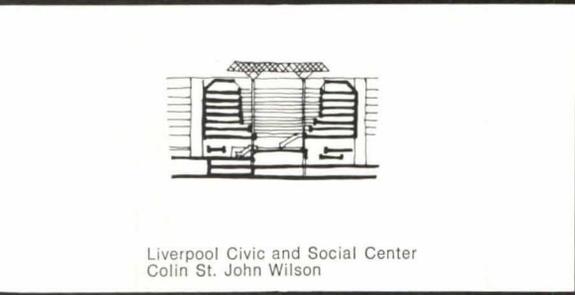


Special transit land-use
district, New York City,
Second Ave. subway
Raquel Ramati; Ada Karmi-
Melamede

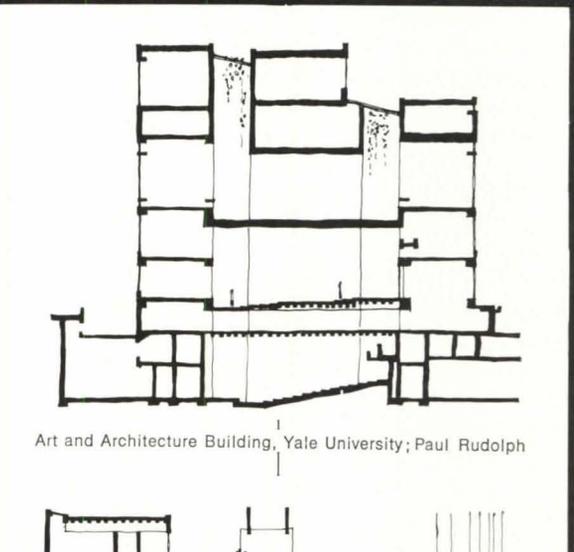
**CONTEMPORARY
SUBLIME**



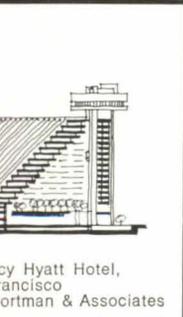
Regency Hyatt Hotel, Houston
Portman III



Liverpool Civic and Social Center
Colin St. John Wilson



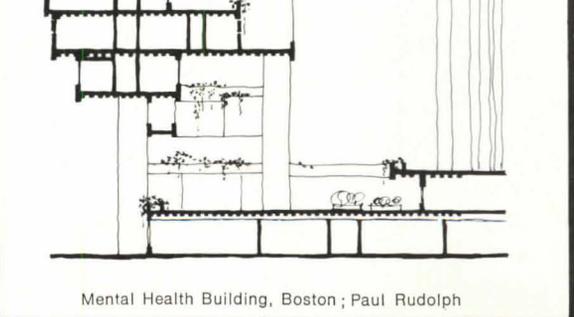
Art and Architecture Building, Yale University; Paul Rudolph



Regency Hyatt Hotel,
Chicago
John Portman & Associates



Regency Hyatt Hotel, O'Hare Airport, Chicago
John Portman & Associates

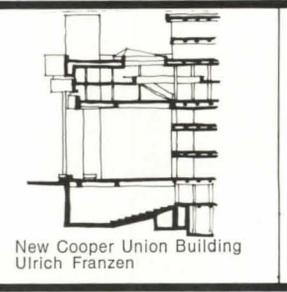


Mental Health Building, Boston; Paul Rudolph

**CAVITIES
AND URBAN
CONTEXT**



Whitney Museum of Art
Frederick Bruehl



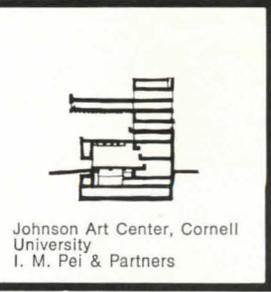
New Cooper Union Building
Ulrich Franzen



North Carolina Blue Cross/
Blue Shield Building
Odell Associates



Dallas City Hall
I. M. Pei & Partners



Johnson Art Center, Cornell
University
I. M. Pei & Partners

A Social Scientist Tells What He Has Learned from Working with Architects

Robert Sommer

The increased contact between architects and social scientists over the past decade is a healthy development; the one-way flow of information is not. As someone who has observed this liaison from the days when architects and psychologists barely knew each other existed, I have been tremendously impressed by the receptivity that architects have shown to social scientists. At times I felt that they borrowed too much, too soon, but over time I believe that the valid and the useful will emerge and become incorporated into architectural practice and the rest sloughed off.

It is time now to explore the other side of this relationship and to ask what psychologists have learned from their association with designers. I don't think that I've heard this question asked, much less answered. It seems obvious that a one-sided collaboration between two professions cannot endure very long. Either both fields must be changed in the process or else the collaboration will become patronizing to the advice-giver and demeaning to advice-taker.

Every design project on which I have been involved has changed me personally and professionally. Cross-disciplinary work with architects has provided insights into my own profession that I would never have obtained working with other psychologists. The unique approach to problems and special talents of designers have enriched me in very specific ways. If I had worked with engineers as closely as I have with architects, I would be a very different psychologist today.

Above all, collaboration with designers has increased my visual literacy. In graduate school, most of my learning was conceptual rather than perceptual, and the major realities were the printed page and

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the keyboard of a calculator (this was before computers were popular). In this atmosphere, I allowed my visual imagery to atrophy and forgot how to express myself graphically.

This neglect became apparent in my work with architects. I can trace my interests in photography and my renewed interests in painting directly to a team effort to design an island resort in Fiji. There were seven professional people involved, including two architects and an architecture student, a city planner, a graphics designer, an engineer and myself. Except for the engineer and me, all sketched the island before trying to design anything. The creative efforts of the others were exhibited on an adjoining wall at the time of our presentation to the client. The sight of the others sketching and the increased intimacy with the island that this seemed to bring encouraged me to try drawing also. While I have never exhibited any sketches, I have managed to lay some on friends, and I derive tremendous satisfaction from art as a hobby.

My interest in serious photography also began on the Fiji project. When it came time to prepare a brochure for the investors, the team leader collected all the photographs we had taken. It was painfully obvious that although my pictures might interest my friends back in California, they would be totally unsuitable for a prospectus. I realized how little I knew about using photographs in my professional work. My earlier books had relied exclusively on text—no pictures or drawings at all. My recent books have included pictures, and I recently finished a book on *Street Art* (see Oct., p. 32A) in which I did all the printing and enlarging myself. I would not have become this deeply involved in photography without the example of my architect friends who never travel anywhere without a camera.

My visual imagery still isn't good, but it is better than it was 20 years ago. I regret having let it atrophy during my school years. This has been a distinct handicap in discussions with designers who can manipulate spaces and forms in their mind's eye while I must use paper or a model. Imagery permits an architect to work from two-dimensional plans

which still look flat to me no matter how hard I try to add a third dimension.

On design review panels, the ability to make constructive comments depends on the degree of visualization. Poor imagery is prevalent not only among social scientists but also among large segments of the population. Designers who rely upon visual thinking are more atypical in this regard than psychologists who do not. Realization of this has permitted me to facilitate communication between designers who operate as if everyone shared their capacity for visualization (which I regard as a positive talent) and others who require scale models or at least photographs of three-dimensional structures before they can make informed decisions. Models have their own disadvantages—how often do you fly over a building at 300 feet?—and the same applies to renderings made at striking angles. I have found that some combinations of models, drawings and plans is preferable to any single technique.

Architecture has provided an example of professional practice that is very different from that of academic psychology but well-suited to my own temperament. A practicing architect sees nothing illogical or unprofessional about designing a church for seven months, spending the next year on a shopping center and the year after on a county jail. In my field, that kind of jumping around would be regarded as dilettantism. This attitude made me feel guilty whenever I switched research areas. I used to know almost everything there was to know about mental hospitals. Later, I knew as much about college dormitories as any psychologist living. From 1969 to 1973, I was the bicycle psychologist. Last year, I was almost totally immersed in a study of prisons. *This kind of intellectual peripatetics* is very unusual among psychologists. Most of my colleagues are still pursuing the same lines of research that they started in graduate school or they have dropped out of active research. I would have dropped

'Their unique approach to problems and special talents have enriched me.'

out, too, if I had continued studying the topic that interested me 25 years ago.

While my emotional involvement in a specific topic may have diminished, my knowledge of the research and vocabulary remain strong. Basically, the cognitive structures remain intact and it is the emotional investment in the field that changes. I am still able to be helpful to people interested in topics in which I am no longer doing research. A few days ago, I received a telephone call from a city official involved in bicycle paths. The day before, I received a request for information about college dormitories and, a few weeks earlier, officials of the state department of corrections asked me about renovating a prison. It is not that I have forgotten everything I had learned previously but that my heart is in my current project.

Using architects as a model has made me feel much less anxious about becoming involved in a new topic. Indeed, I relish the thought of exploring something different. I also realize, however, that I will have to pay my dues in making a change. This is something I have found that many architects overlook. Over the years, I have been critical of designers who pretend that nothing significant was ever written or done before and who spend their time reinventing lopsided or square wheels. At one time, it may have been legitimate to claim that nothing worthwhile was written in architecture (although I never believed this), but it is no longer true today.

I don't care what the project is—design of a bank, a shopping center or an underground school—there is a literature available. Probably it is not very extensive or very good, but there will be some nuggets to be found. Reliance upon consultants and secondary sources should obviate the need for an extensive literature research with every new project. By secondary sources, I mean such books as Roz Lind-

heim's account of children's hospitals, Gary Coates on school design or Bill Nagel on prison architecture. All of these authors have attempted to pull together the work of others and make it accessible and understandable to the practitioner. It would be very uneconomical for an architect to rummage through (or even try to locate) all the primary sources without knowing whether or not they would be intelligible and relevant.

The ability to locate and use reference materials is one of the most helpful skills acquired in graduate school. I can go to the library tomorrow and begin finding out whatever was written on any topic. This will not be the total story, but I will discover strands, links and clues that will enable me *eventually* to find most of the important work. A trip to a major library in another city will be necessary, but I know that I can begin with what is available on my own bookshelves and in the campus library.

One doesn't become an expert in this way, but one can learn enough to identify experts and to talk intelligently with them. I will credit my association with architects with having given me confidence to explore areas where I have had little background or experience, providing that I am willing to do the necessary research. This approach is one of approximation. When I ask a person for information about a specific topic, I do not anticipate that he or she will be able to fully answer my query. Rather, I expect this person to provide some information but also the names of other people and sources which I might check that will put me closer to the subject. There may be no single ultimate expert, but each person I interview puts me closer to whatever major pools of information exist. This approach takes time, patience and, above all, a willingness to ask naive questions about matters that others have taken for granted.

My work with architects has given me a broader conception of the role of psychology in ameliorating social problems. Reading previous research, one quickly becomes aware of how little is known about most issues. I have always accepted these lacunae of knowledge as a challenge rather than a cause for despair. In my

own work on prison architecture, I was surprised to find that virtually no research existed on the effects of solitary confinement. There were studies of crowded rats and sika deer on an Atlantic island and upon college student volunteers and aquanauts in confinement for short periods, but nothing about the situation of angry, frustrated inmates living in tiny, badly ventilated cells for years. The same knowledge gap occurred with more mundane issues, such as the number of students in a dormitory room or patients in a hospital ward. Attempting to solve real problems has changed my system of research priorities from what it would be if I wrote solely for other psychologists.

Collaboration with designers has made me more respectful of deadlines. University deadlines are not terribly significant for professors. When you shuffle papers, the worst consequence is that a page arrives late on someone's desk. It has been my experience over 15 years of college teaching that most committee reports are several months overdue and the larger the committee, the longer the delay. The inordinate time required to process forms still amazes me. Routine matters take months and even then will be returned for trivial revisions. Hiring and promotion require a half-year of negotiations and paperwork. The only deadlines for faculty that are widely respected involve grades for students, but even here, one can send in an "incomplete" if the work is not done. The university is notorious for its long-range plans and plans-to-plan which never seem to be realized.

The leisurely pace of the university and its long-range orientation can be contrasted to the feverish pace of architectural practice where deadlines are yesterday and there are financial penalties if these are not met. Long-range planning is unknown, and everyone seems to wait until the last minute to do anything. This is a gross stereotype, of course, but it does reflect the contrast between the unhurried pace of academe and the frantic rush of practice.

The person who tries to keep a foot in
continued on page 56

Redesigning an Entire Town (and Its Lifestyle) For Energy Conservation

"What is new and unique in this project is the application of energy-conserving technology to a *total existing community*—the city of Winona, Minnesota." So begins a description of a project carried out by students of the energy design studio of the school of architecture and landscape architecture at the University of Minnesota.

The university students chose the typical upper Midwestern town of Winona, Minn., because its weather (ranging from 30 degrees below in winter to 95 above in summer) makes it a challenge, and its size (27,000 population) makes it manageable in terms of energy conservation schemes. Also, unlike many similar communities, Winona does not yet suffer from out-migration. It enjoys the advantages of a state university and two private colleges, as well as that of being a center for the surrounding agricultural communities.

The members of the energy design studio have outlined a plan whereby the small city could approach energy sufficiency by the year 2000, through careful conservation, coupled with the introduction of sun, wind and bio-fuel technologies. Asserting that "we don't have to tread water apprehensively awaiting the arrival of a new Dark Age," the students do "not promise utopia." However, along with their proposed changes in energy management come suggestions for a radical reorganization of lifestyles reminiscent of 19th century utopian schemes.

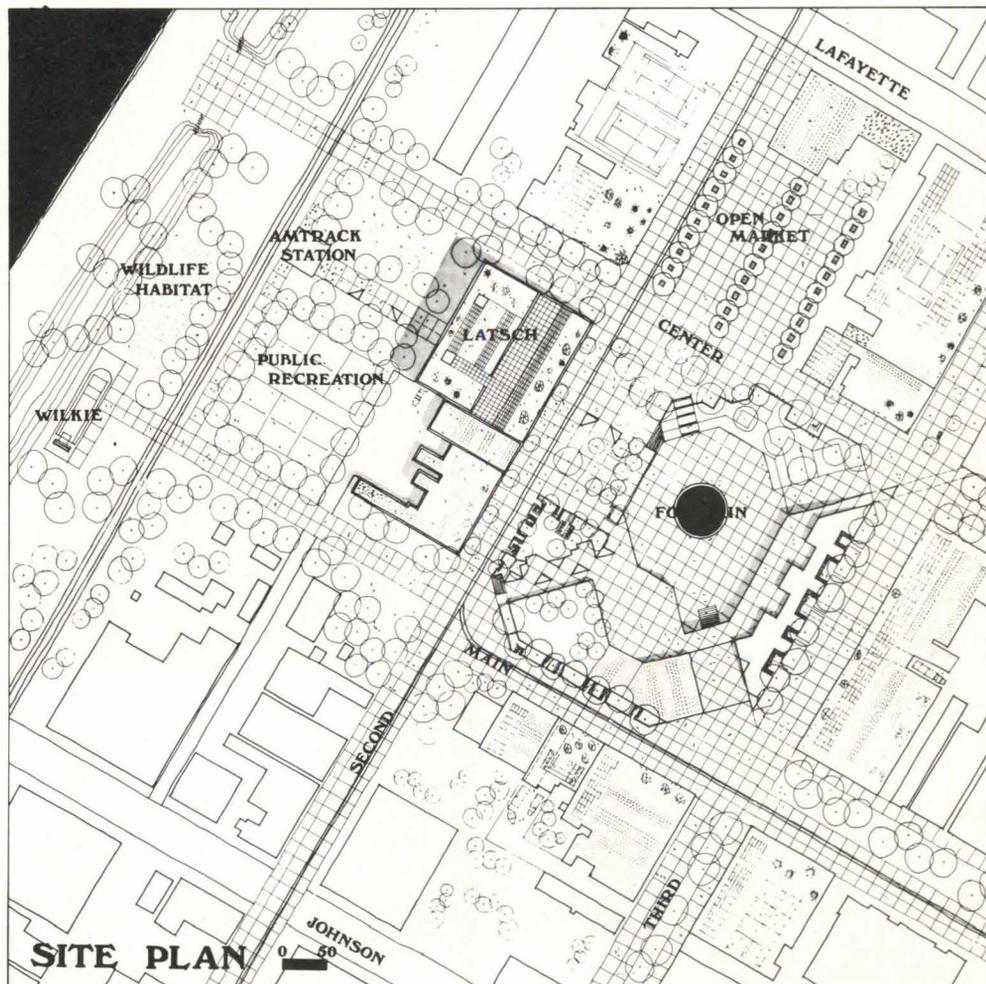
The changes aimed at achieving energy self-sufficiency would be made gradually, in three stages: "The first would be to limit needlessly wasted fossil fuel energy and expand household and neighborhood food production; the second would be to convert to energy systems which do not require fossil fuels, and the third would be to explore new social patterns."

The first phase would entail such fairly obvious measures as diminishing reliance on the automobile, improving insulation on buildings and increasing homegrown produce.

The second phase of replacing existing energy systems could be carried out within five to 15 years, according to the students: "Greenhouses can provide fresh vegetables all year round, even in the Upper

Midwest. Solar energy can dry and cook food (in solar ovens), heat water, and heat both homes and places of work. Controlled burning of wood corncobs, grain alcohol and wood alcohol, and methane gas can supplement solar heating. Wind can provide power to pump water and generate electricity. Trees can be planted in shelter belts to give protection from winter wind and summer heat. . . ."

The final phase, that of exploring and instituting new social patterns, would involve a shift from an energy intensive to a labor intensive society. In the process, postulate the authors of the plan, the extended family may return; unrelated people may live together as a family; do-it-yourselfers may turn into full-time craftsmen; people may live where they work, and whole neighborhoods could become economically independent. "As you read

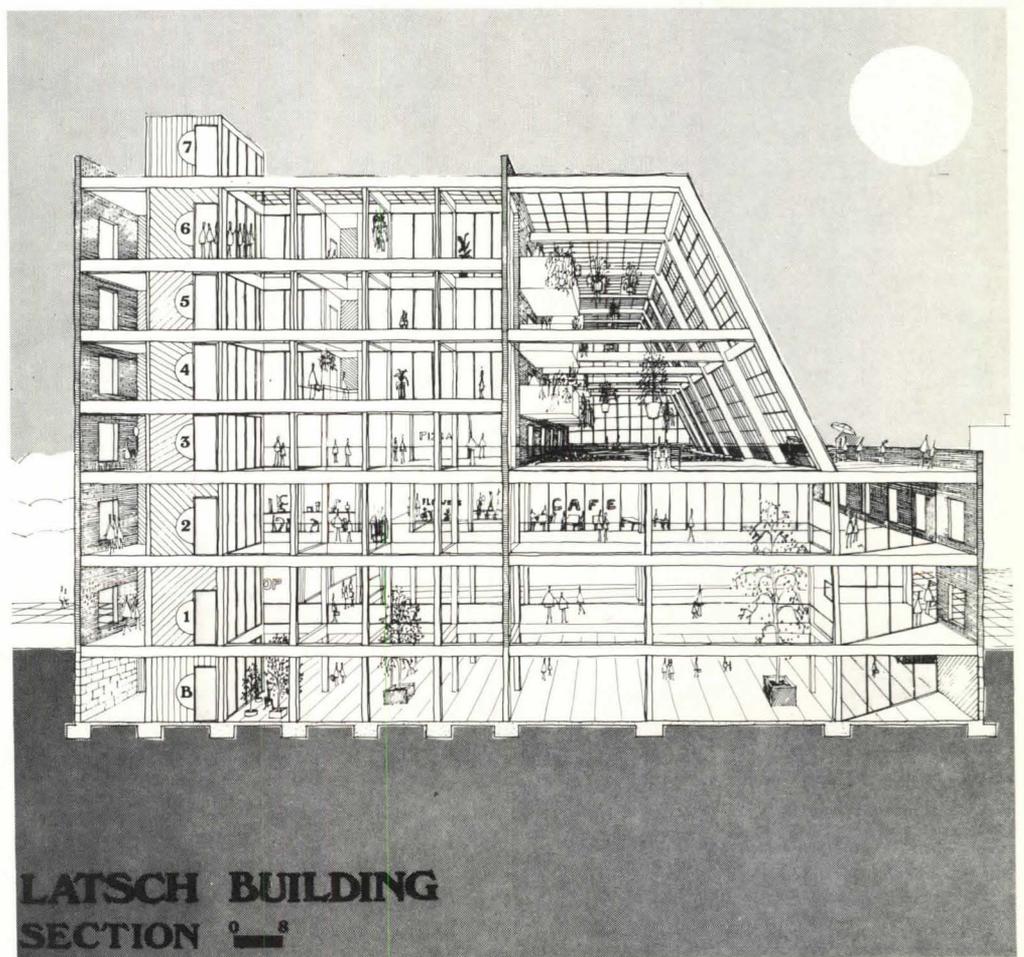


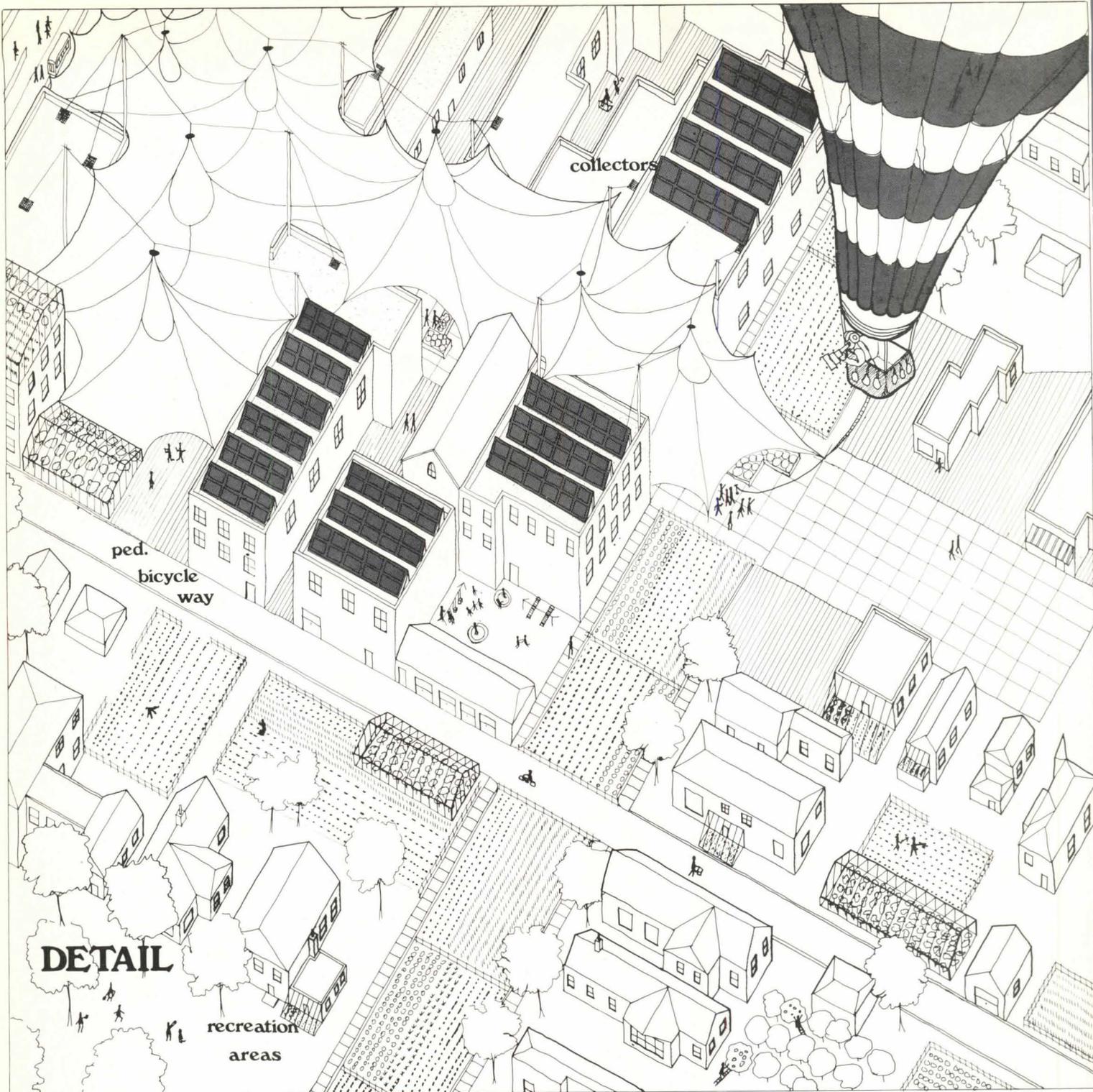


further," note the authors, "you may begin to get the impression that the entire population of Winona in the year 2000 will be earning its living by making shoes and gathering mushrooms." Not so, they say, for "the emphasis is not only on economic self-sufficiency, but on economic diversity." Nonetheless, their scheme leans heavily on a return to a way of life characteristic of an earlier period in America.

Having built a general framework, the students now tackle specifics, beginning with an ambitious plan aimed as much at renovating Winona's languishing downtown business district as at promoting energy conservation. Their plan would transform the prominent but presently deteriorating Latsch building into a multiuse center, containing shops and professional offices and fronting on an arcade which would be enclosed in winter and heated by solar collectors. Insulating sod roofs covering this partially underground structure would double as "urban string parks." Many downtown streets would be closed off and planted with grass and trees, "creating a dramatic reduction in summer heat." The land behind the Latsch building would be made into a public park, once again linking downtown with the Mississippi.

Next, the architecture students turned their attention to energy conservation on





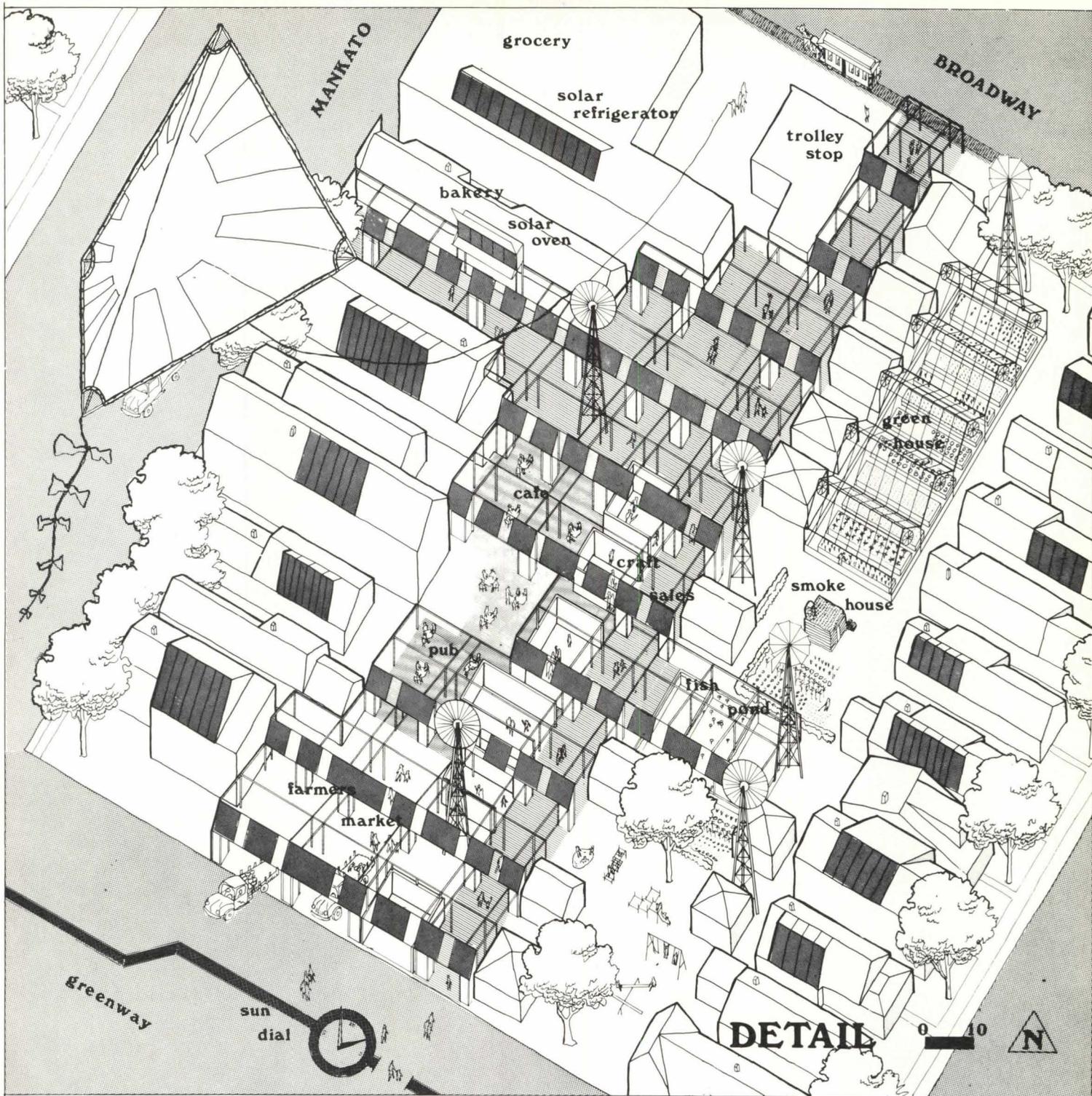
the neighborhood level, focusing on eight blocks in the Third and Franklin area shown on this page. Their proposal would turn streets and parking areas into gardens, bikeways and walkways. It would introduce food processing plants, which would allow daily harvesting and sale of produce in season, and reduce the need for transportation, storage and refrigeration. In-filling between houses would diminish heat loss in winter, while solar collectors and wind generators would reduce the neighborhood's reliance on the

city power system. An inexpensive tensile membrane, made of treated canvas, would be suspended over the shopping districts to maintain a winter street temperature of 45 to 50 degrees, permitting year-round sidewalk cafes and other outdoor activity. "At the small scale of the neighborhood market, much of the processing, chemical preserving and refrigeration of food can be done away with. When produce is bought and sold pretty much on a daily basis, the ice house, the smoke house and the root cellar are reasonable substitutes,"

write the authors of the Winona plan. A sketch of a proposed food cooperative and neighborhood market is shown above right.

The food cooperative, say the design studio members, should encourage labor intensive as opposed to energy intensive agriculture, explore more natural ways of pest control, influence local growers to put more emphasis on vegetable production, and less on meat, and teach good nutrition.

In addition, the plan includes construction of an anaerobic sewage plant, which would produce methane gas from both



city sewage and livestock manure. The gas would, in turn, be used to fuel a turbine generator supplying power for the sewage plant itself as well as for other facilities.

There would also be a "riverfront energy-conservation research and exposition center," a new vocational rehabilitation center, craft cooperatives, a state university to act as a catalyst for change, a riverboat community and an "alternative living community."

The efforts and attitudes of the student design group were well characterized when

one of its members said: "The changes which the new energy era are going to force upon us will produce some ingenuity and some resilient ad-hocism—and probably a few interestingly eccentric solutions. (Like the English automobile that runs on methane gas from chicken manure.) The emerging era should be a cause for hope, not nervousness." *Andrea O. Dean*

The following students participated in the project discussed in the accompanying article: Doug Derr, Dwight Doberstein,

Drew Erickson, John Foss, Franz Hall, Bruce Johnson, Gary Krocak, Mike Lopac, Kevin McDonald, Dan Moldenhauer, Gary Nyberg, Greg Oltvedt, Rick Rampe, Bill Rust, Sara Schmanski, Paul Snyder, Rolf Stoylen, Tim Sullivan, John Torberg, Timothy Whitten, Scott Williams. The book, "Winona, Towards an Energy Conserving Community," was edited by Huldah Curl and can be obtained for \$5 plus 16¢ sales tax by writing: Publications, University of Minnesota, 2818 Como Ave. SE., Minneapolis, Minn. 55414. Ed.

Exploring the Role of Environmental Design In Crime Prevention

The creation of "defensible space" as an approach to crime prevention was the dominant theme of a seminar conducted this summer by the Law Enforcement Assistance Administration at Meadowbrook Hall, a splendid, rambling mansion built in the 1920s in Rochester, Mich.

Architects, LEAA personnel, law enforcement officials, security and fire specialists and others were invited for the purpose of assisting LEAA in "the development of its policies regarding support of innovative architectural design in criminal justice." The seminar also provided a glimpse of LEAA's present direction in the area of "crime prevention through environmental design," currently the subject of a \$2 million research project based on the concept of "defensible space," as widely publicized by Oscar Newman in his book by that name.

Newman gave a talk at the seminar and showed a new BBC film, featuring himself, called "The Writing on the Wall." He is currently completing design guidelines for LEAA, and his ideas are being tested in three new housing projects by the Department of Housing and Urban Development. All in all, the man and his ideas provided both spark and fuel for this seminar.

"The underlying philosophy of 'defensible space,'" he said, "is that human nature is such that people will protect what they perceive as theirs. If you give someone an area, identify it with him, you've created a mechanism whereby he helps to protect it."

Newman pointed out that when large residential complexes are subdivided into smaller components so that each can be controlled naturally, crime goes down. He illustrated the point with two adjacent public housing projects in New York City, one low-rise, the other highrise. The number of units per acre and the types of families occupying both are virtually identical. But crime in the highrise is four times higher.

Surrounded by wide open spaces, the highrise leaves the issue of territorial sovereignty and responsibility open, creating a no man's land that easily becomes a battlefield for vandals, muggers, gangs. Since mothers cannot be in their apart-

ments and still supervise outdoor play, they don't let their children out at all or allow them to go unsupervised. All too often kids run wild. "Residents can feel no sense of identify with anything in their surroundings outside their apartments," said Newman. The apartment house corridors have become littered and fearsome places.

Newman illustrated for the seminar participants, by means of an experiment, how people respond to intrusions into their highrise-created insularity. A tape recorder, hidden in a hallway, broadcasts an argument. As the argument grows louder, residents first bolt their doors, then turn on television sets to block it out of their consciousness.

Newman commented: "The more we remove people from a stake in spaces, the more government will have to step in to protect them. We are asking people to abrogate responsibility. This is a process which grows and requires ever more reinforcement." In the end, of course, it still fails.

By contrast, the low-rise units are designed to create "defensible spaces." There are only six or eight units to a complex, and in each, windows and doors overlook the street and an inner courtyard. Residents easily recognize each other, and having visual access to the street, can spot strangers and intruders. Since apartments also look onto a courtyard play area, residents can actively supervise their children at play outdoors.

Ideally, said Newman, if the opportunity to start from scratch exists, family housing should take the form of low-rise units that are easily distinguishable from each other. Doors and windows should look onto streets, and each resident's zone of influence should be brought right up to the sidewalk by means of curbs, landscaping or fences. "This subdivision of space," said Newman, "will reinforce residents in their feeling that they have the right to intervene in their own behalf."

But, continued Newman, highrises need not be all bad. For example, if elderly persons are housed in tall buildings by themselves, the crime rate within the building is virtually zero. The elderly tend to congregate in corridors, providing their

own supervision. They go to bed early and can easily be safeguarded with help from one doorman. To a less satisfactory degree, highrises can also work for single people, and working couples without children.

In an effort to carry out its mission of reducing crime, LEAA is currently testing "defensible space" concepts in four different settings: residential, schools, commercial and transportation. In each case, a three-pronged approach is being employed, which includes innovative architectural design, vigorous police support and active citizen participation. The following are some highlights:

- As outlined at the seminar by Richard Rau of LEAA, in 1973 the agency launched a project in two residential neighborhoods in Hartford, Conn. The purpose in each case was to diminish stranger-to-stranger crimes and fear.

Rau's group began with a survey of the physical sites, users and law enforcement operations. Of the two neighborhoods involved, Asylum Hill is the more prosperous. Located next to downtown, it has many single couples and 75 percent of the residents are white. The other area, Clay Hill/South Arsenal is 78 percent black and contains several public housing projects. "Open spaces in both areas acted as a sieve to allow strangers to come in," said Rau.

No physical changes were undertaken to close off streets in the poorer neighborhoods, because residents feared that cul-de-sacs would wall them off further from the rest of the city and felt that the money could be better spent on renovating deteriorating housing. A team policing effort and a community program were planned.

In the predominantly moderate income neighborhood, cul-de-sacs were designed, and a police unit was permanently assigned to the area in a return to the old time tradition of neighborhood policemen.

Design of the Hartford project is complete. Construction and implementation will begin shortly.

- Another LEAA project is aimed at making the Union Avenue Corridor in Portland, Ore., more secure. The area is a

continued on page 64

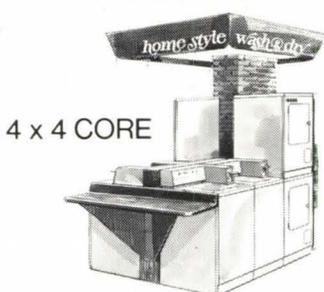
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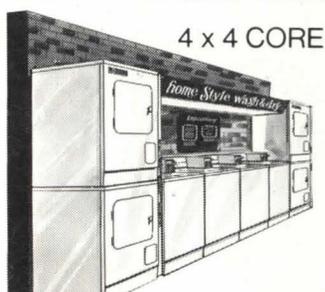
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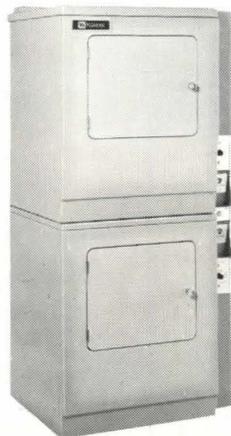
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Further Gift Possibilities from Among the New Titles of 1975

Many of the books mentioned by architects (p. 20) are "oldies," as one respondent put it. Hence, some books published this year are suggested now because they merit consideration as Christmas gifts by and to architects. (The 1975 books on the architects' lists are eliminated here, but the reader is urged to note them; included in the lists are such appropriate candidates for Christmas giving as the recently published *Great Architecture of the World* edited by John J. Norwich (Random House) and other handsome books. Although none of the following books has stood the test of time, they are pertinent and timely—and often beautiful examples of modern bookmaking.

Doubtless, a spate of still more handsome books will appear just before Christmas, for many intriguing ones have been announced in publishers' catalogs. For example, *The Only Proper Style: Gothic Architecture in America* by Calder Loth and Julius T. Sadler (New York Graphic Society) is sure to be in the tradition of this publisher's satisfying books.

A final suggestion on where to obtain any of the books that may have piqued the reader's fancy. An AIA member may want to start with the publications marketing department at the Institute and various component offices (for that welcome discount). The next step is a good bookstore; if this fails, addresses of publishers may be found in any public library.

And now some 1975 books—

For the Historically Inclined:

American Gothic: Its Origins, Its Trials, Its Triumphs, text and photographs by Wayne Andrews (Random House, \$15 hardbound; \$6.95 paperbound): The title says it all. How the movement started in Georgian England and spread to this country "to shape the course of modern American architecture."

American Victorian Architecture: A Survey of the 70's and 80's in Contemporary Photographs, with a new introduction by Arnold Lewis and notes on the plates by Keith Morgan (Dover, \$6): This shows you how the old Victoriana really looked to the Victorians. The book con-

tains 120 photographs by anonymous photographers from a portfolio that was first published in Paris in 1886.

Angkor: The Monuments of the God-Kings, photographs by Bela Kalman, text by Joan L. Cohen (Abrams, \$45): One of the most beautiful books of the year, this one displays gloriously the monuments of Angkor, the so-called "heavenly city on earth."

Architectural Conservation in Europe, edited by Sherban Cantazucino (Watson-Guptill, \$20): A compilation of insightful articles on the measures that are being taken in Europe to preserve a priceless heritage.

The Architecture of Ancient Greece: An Account of Its Historic Development, William Bell Dinsmoor (Norton, \$18.95): A book with powers of endurance, having first been published in 1902. This reprint of the third revised edition of 1950 has a new preface and illustrative materials.

City of Independence: Views of Philadelphia Before 1800, Martin P. Snyder (Praeger, \$25): Have a friend going to the 1976 AIA convention? If so, this handsome book on Philadelphia's development is a natural. Includes maps, water-color views, documents and woodcuts.

Early Russian Architecture, Hubert Faensen and Vladimir Ivanov (Putnam, \$42.50): Beautifully illustrated with color and black and white photographs, this book covers architecture and decoration in Russia from the years 1000 to 1700. The first section discusses the evolution of early Russian architecture; the second analyzes the major monuments.

The Empire State Building, Theodore James Jr. (Harper & Row, \$12.95): A chatty book by a man who is in love with this "jewel in the crown of Manhattan." He writes enthusiastically about the skyscraper, giving much information as well on the city's people and customs.

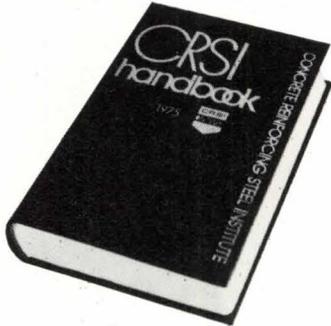
Greek Architecture, A. W. Lawrence (3rd edition, Penguin, \$30): An analysis of Greek architecture from the prehistoric settlements of Troy to the absorption of Hellenism into the Roman Empire.

Houses, Villas and Palaces in the Roman World, A. G. McKay (Cornell University Press, \$19.95): An enjoyable account of Roman domestic architecture,



the Reinforced Concrete reference series.

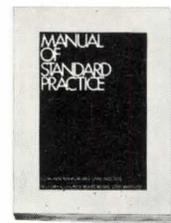
the books you need when you want to go by the book.



a *New for 1975! The authoritative design handbook.* This year's **CRSI Handbook** is bigger and better than ever. Packed with money-saving design solutions. Updated to meet 1973 and 1974 ACI Building Code revisions. Includes new, simplified section on splices; new pile cap and drilled pier tables; shortcut designs for slender columns; *Two-Way Slab Design* section (formerly sold as separate book for \$4.00); and pages of tables that give you complete designs directly—without formulas or figuring. **CRSI Handbook**, 2nd edition, 1975, 816 pages, 6" x 9". Hardbound. **\$20.00** postpaid.



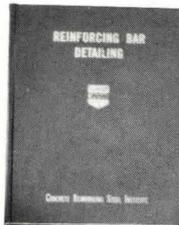
b *The complete book on a new, growing type of construction.* Supplements the *CRSI Handbook*. Find complete designs tabulated for "sand lightweight" (w=115 pcf) and "all-lightweight" (w=95 pcf) concrete. Designs are based on $f'_c=4000$ psi, Grade 60 rebars and include: (1) flat plates; (2) flat plates with spandrel beams; (3) flat slabs with drop panels; (4) waffle flat plates (two-way joists); and (5) one-way concrete joist construction. There's more, including code requirements, fire test results for various ratings, and stiffness ratios for quick deflection estimates. **Structural Lightweight Concrete Design Supplement**, 1974. 220 pages, 6" x 9". Hardbound. **\$8.00** postpaid.



c *Codes and specs reference source.* Contains illustrated explanations of industry standards and practices for reinforcing steel. **Manual of Standard Practice**, 1973. 80 pages, 8½" x 11". Soft cover. **\$2.00** postpaid.



d *Covers the most economical placing methods.* Describes recommended field practice and the placing methods that save big money. Ideal for apprentices, journeymen, inspectors. **Placing Reinforcing Bars**, 2nd Edition, 3rd printing, 1975. 186 pages, 5¾" x 8¾". Soft cover. **\$2.50** postpaid.



e *All the details on detailing.* This single, complete volume covers detailing of rebars, bar supports, welded wire fabric. Invaluable for on-the-job detailer training. Prepares beginner to use A.C.I. detailing manual. Describes manual detailing of footings, foundations, walls, columns, floors, bridges, and buildings. Plus computer estimating and detailing. **Reinforcing Bar Detailing**, 1970. 272 pages, 8½" x 11". Hardbound. **\$18.50** postpaid.



f *Comprehensive data on a vital subject.* Gives complete coverage of economics, design, detailing, and construction of post-tensioned box girder bridges. Published jointly with PCI. **Post-Tensioned Box Girder Bridges**, 1971. 106 pages, 8½" x 11". Wire-spiral bound. **\$6.00** postpaid.

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giving the reader much information on the Romans and their exotic lifestyles.

Prairie School Architecture: Studies from 'The Western Architect,' edited by H. Allen Brooks (University of Toronto Press, \$30): A compilation of significant articles from the magazine published in Minneapolis between 1902 and 1931 which was the only journal to document extensively the architecture of the Prairie School.

Revelations of New England Architecture: People and Their Buildings, Curt Bruce and Jill Grossman (Viking, \$15.95): An exploration of 200 years of New England architecture, with reflections on the people who built the buildings. Hand-somely illustrated.



For the Theoretician:

Architectural Alphabet, 1773: Thirty-three Plates Reproduced in Facsimile, Johann David Steingruber (Braziller, \$20): For the architect who would like to while away some hours with Steingruber's ingenious inventions of contours and ground plans of buildings based on the letters of the Latin alphabet, it's good news that there's this facsimile edition of a very rare 200-year-old book.

Developments in Structural Form, Rowland Mainstone (MIT Press, \$25): A humanistic tour de force on the evolution of architectural structures up to the present day. Illustrative materials complement the lucid prose.

Emerging Form in Architecture: Observations with Lev Zetlin, Forrest Wilson (Cahners, \$25): For a decade, Wilson has explored the thinking of pioneering design engineer Zetlin. This book reveals in nontechnical language Zetlin's approach to engineering problems. Many drawings, diagrams and photographs.

Synergetics: Explorations in the Geometry of Thinking, R. Buckminster Fuller (Macmillan, \$25): A brilliant exposition of the mathematical and philosophical bases of Fuller's world views. As Louis Kahn might have expressed it, the book is "not for the faint-hearted."

Theory and Practice of Color, Frans Gerritsen (Van Nostrand Reinhold, \$40): A handsome book in which the author discusses theories and facts about the perception of color. It covers every level—"from watercolor to wallpaper."



For the Urbanite:

Architecture as a Home for Man, Lewis Mumford (edited by Jeanne M. Davern, Architectural Record Books, \$15): This book commemorates the 80th birthday of Mumford, who has had a profound effect upon social and architectural thought. Here are collected 24 essays, first published in *Architectural Record* and the now defunct magazine *Architecture*. Editor Davern has skillfully arranged the essays into five so-called "mini-books"; the one on "The Future of the City" is especially provocative.

City Planning: The Games of Human Settlement, Forrest Wilson (Van Nostrand Reinhold, \$8.95): A choice little book about how to play urban games and at the same time learn much about human settlements and how they have been influenced by economics, religion, politics and social customs.

Crowding and Behavior, Jonathan L. Freedman (W.H. Freeman & Co., \$4.50): Freedman and other investigators have conducted recent research, reaching the conclusion that crowding is neither good nor bad for the human being. "Instead, crowding intensifies the effects of preexisting social situations, themselves either good or bad." In conclusion, writes Freedman, urban problems "are not caused by crowding." This is an important and provocative book and should be read by everyone concerned with density and design.

Maya Cities: Placemaking and Urbanization, George F. Andrews (University of Oklahoma Press, \$20): A meaningful study of the forms and functions of the Maya city, with an analysis of its physical form and spatial organization. Copiously illustrated.

New Towns: Antiquity to the Present, Ervin Y. Galantay (Braziller, \$15): New towns, says the author, are alternatives to "land-wasting suburbs." He sketches the history of new towns concisely.

Sotsgorod: The Problem of Building Socialist Cities, N. A. Miliutin, introduction by George Collins and William Alex (MIT Press, \$25): First published in the Soviet Union in 1930, this superbly illustrated book offers insights into how a Communist planner translated the thinking of socialist philosophers into specific projects.

Urban Planning and Design Criteria,

Joseph DeChiara and Lee Koppelman (2nd edition, Van Nostrand Reinhold, \$35): An expanded and updated edition of a book published in 1969 with the title *Planning Design Criteria*. It encompasses a great deal of practical information, providing a single source of basic reference materials on urban planning and design.

Venice, Frail Barrier: Portrait of a Disappearing City, Richard de Combray (Doubleday, \$15): There are many books about this unique city, but this one is different. It's Venice as the Venetians know it; it's Venice at festival time, but also Venice in fogs and floods. The photographs and reproductions of paintings are stunning.

For the Green Thumber:

Book of House Plants, Joan Lee Faust (New York Times Book Co., \$5.95): How to bring an office or home to life with indoor plant craft.

Build Your Own Greenhouse: How to Construct, Equip and Maintain It, Charles D. Neal (Chilton Book Co., \$9.95): The title is self-explanatory; a book sure to



please those interested in greenhouses.

The Personal Garden: Its Architecture and Design, Bernard Wolfgensinger and José Daidone (Van Nostrand Reinhold, \$30): A beautiful book to delight anyone who wants to transform a bit of land. House and garden should harmonize, say the authors, to make a perfect whole.

The Terrace Gardner's Handbook, Linda Yang (Doubleday, \$8.95): Chuck full of advice on how to grow plants in small spaces.

For Architecture Devotees:

Alvar Aalto, edited by Karl Fleig (Praeger, \$10 hardbound, \$4.95 paperback): The "best" of Aalto's designs are summarized, with brief information, photographs, plans and sketches for each building and project presented.

Andrea Palladio, Lionello Puppi (New York Graphic Society, \$27.50): A fresh and penetrating appraisal of the Palladian "achievement."

18 Years with Architect Louis I. Kahn, August E. Komendant (Aloray, \$15): A consulting structural engineer tells how he and Kahn worked together, project by project. He gives insights into Kahn's ap-



proach to design problems, his relationships with clients and his general views on life and architecture. Among the illustrative materials are some of Kahn's original sketches never published before.

George Howe: Toward a Modern American Architecture, Robert A. Stern (Yale University Press, \$25): A perceptive biography of one of the pioneers of modern architecture who started out as a traditionalist and in the late '20s changed to become a leading exponent of modernism.

In the Cause of Architecture: Essays by Frank Lloyd Wright for Architectural Record, 1908-1952, edited by Frederick Gutheim (McGraw-Hill, \$17.50): Essays by Wright which "form the only written record" of his architectural theories. The book is enhanced by essays written by eight people who knew Wright and enriched further by Wright's drawings and many photographs.

James Stirling: Buildings & Projects, 1950-1974, introduction by John Jacobus (Oxford University Press, \$30): Jacobus says that the "complex and startling shapes of Stirling's buildings reveal themselves as some of the most esthetically elegant architectural solutions" since Le Corbusier's villas of the '20s. This book documents comprehensively the British architect's work.

Le Corbusier, Stephen Gardiner (Viking, \$7.95 hardbound, \$3.95 paperbound): The author believes that attacks on Corbu have been both "bitter" and "ill-informed." Here he aims to set the record straight, looking at the architect's work as a whole, including his poetry, paintings, drawings, sculpture and architecture.

Le Corbusier in Perspective, edited by Peter Serenyi (Prentice-Hall, \$8.95 hardbound, \$2.95 paperbound): A collection of the writings of some of the architect's "most spirited contemporary critics," with the purpose of arriving at a better understanding of Corbu's contributions.

Sert: Mediterranean Architecture, Maria Lluisa Borrás (New York Graphic Society, \$17.50): The large buildings and complexes designed by Sert are admired by many, but this book gives insights into his "more intimate" buildings in Mediterranean cities.

Ten by Warren Platner, edited by Jeremy Robinson (McGraw-Hill, \$24.50): In the foreword to this exceedingly beautiful book, with its array of stunning photographs in black and white and color, Ezra Stoller says that an "architectural synthesis" of beauty and function "is expressed to a rare degree in the work of Warren Platner." The book reveals as well that "works of modest dimensions can achieve "distinction" in the hands of an architect who is skillful not only in the design of buildings, but also in their interiors and furnishings, creating a vibrant whole.

For the Practical Professional:

Apartments, Townhouses and Condominiums, edited by Elisabeth Kendall Thompson, FAIA (2nd edition, McGraw-

Hill, \$18.50): A collection of design examples from *Architectural Record* articles on multiunit housing. Many illustrations.

Designing Architectural Facades: An Ideas File for Architects, Kurt Hoffman (Whitney Library of Design, \$17.95): More than 350 international examples showing how architects have solved the problems of exteriors.

Dictionary of Architecture and Construction, edited by Cyril Harris (McGraw-Hill, \$35): More than 10 years in preparation, this comprehensive reference book defines all the terms needed for communication in the daily practice of architecture.

The Hospital: A Social and Architectural History, John B. Thompson and Grace Goldin (Yale University Press, \$25): This copiously illustrated book

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"combines modern thinking about hospital design with the social, medical and cultural ideas of the past." A must in the library of the hospital planner.

Perspective Sketches II, Theodore D. Walker (PDA Publishers, \$20 hardbound, \$14 paperbound): The renderings here, exceedingly handsome, cover a wide range of techniques.

Planning and Design of Airports, Robert Honojeff (2nd edition, McGraw-Hill, \$24.95): An up-to-date edition of a classic on airport design. It's a must in the library of all airport planners.

Structure in Architecture: The Building of Buildings, Mario Salvadori and Robert Heller (2nd edition, Prentice-Hall, \$13.95): A completely revised version of an excellent study of structure. Salvadori shows how a harmonious marriage can be created between intuition and mathematics. Complemented by Heller's clear-cut illustrations.

Survival & Growth: Management Strategies for the Small Firm, Theodore Cohn and Roy A. Lindberg (Amacon, a division of the American Management Association, \$16.50): Not directed to architectural firms specifically, but a book filled with practical advice.

The Uneasy Coalition: Design in Corporate America, edited by Thomas F. Schutte (University of Pennsylvania Press, \$8.50): Need a little something for a client? The essays by prominent Americans collected here zero in on the fact that good design makes good business sense whether it's applied to packaging or architecture.



For the Art Lover:

American Art Since 1900, Barbara Rose (revised edition, Praeger, \$6.95): A masterful interpretation of the evolution of American art to the mid-1970s.

The American Eagle, Philip M. Isaacson (New York Graphic Society, \$29.50): Any AIA member will be interested in this survey of the way in which the American eagle has become a major symbol and decorative art form.

Art Deco Architecture in New York, 1920-1940, Don Vlack (Harper & Row, \$15): A most readable book, abounding in illustrative materials on exteriors and interiors in the Art Deco style, making it a contribution to the new interest in this phase of art and architecture history.

Art in Society, Ken Baynes (Viking \$27.95 until 12/31/75, \$35 thereafter): This book is based on the premise that "culture resides in the factory as well as in the museum, that it strikes the office as often as it does the university, and that it rides the subway as comfortably as the winds of genius."

Byzantine Style and Civilization, Steven Runciman (Penguin, \$5.95): Want a stocking stuffer? This paperback meets Penguin's high standards, telling how Byzantine art and architecture united color and harmony "to interpret divine beauty to humanity."

Fundamental Structure: Nature's Architecture, David L. Drabkin (University of Pennsylvania Press, \$25): Through photomicroscopy, a renowned biochemist shows that crystalline hemoglobin structures can be hauntingly beautiful. Norman N. Rice, FAIA, in the foreword says that "the scientist and the artist are two aspects of the same man." Scientist Drabkin is artist in that he senses "nature's beauty."

An Illustrated Dictionary of Ornament. Dora Ware and Maureen Stafford. New York: St. Martin's Press, 1975. 246 pp. \$15. Nearly a thousand definitions and cross references are given in this copiously illustrated reference work. The definitions cover terms used in architecture, furniture design, heraldry, printing and styles of ornament and decoration, referring to the character, use, appearance and application of the term. The concise definitions are easily grasped by the user.

Inside Today's Home, Ray Faulkner and Sarah Faulkner (Holt, Rinehart & Winston, \$17.50): A copiously illustrated guide to making living spaces handsome—and comfortable.

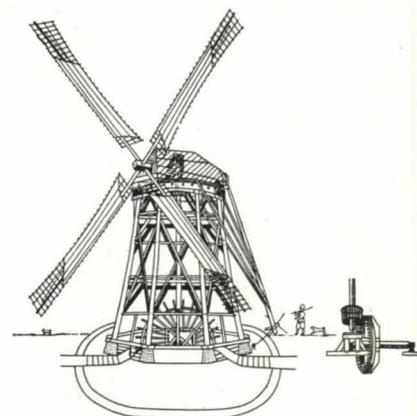
Michelangelo: Sculptor, Painter, Architect, Charles de Tolnay (Princeton University Press, \$19.50): This distillation of de Tolnay's unprecedented five-volume series on a true genius is enhanced by nearly 400 illustrations.

A Mother Goose for Antique Collectors, Alice Van Leer Carrick and Kenneth Allen Robinson; illustrated by Dwight Taylor (Dover, \$1.25): A bit of whimsy that's sure to charm any collector of antiques. A sample of the rhymes: "Hush-abye, Baby, on the tree top/Daddy's below in Ye Chippendale Shoppe/Gouging and sawing and patching with glue/Making old furniture where there was new."

Pueblo: Mountain, Village, Dance, Vincent Scully (Viking, \$19.95): An evocative study of the American Southwest and its people in which a noted art historian writes eloquently about the relationships between landscape and architecture and the remarkably intricate ceremonial Indian dances.

The Streamlined Decade, Donald J. Bush (Braziller, \$15 hardbound, \$7.95 paperbound): Industrial design in this country came into being in the '30s, and

the resulting "streamlining" for efficiency and speed was reflected in products, packaging, furnishings, transportation vehicles, architecture. Here's a "representative view of the range of applications of streamlining, its development from the sciences and its relationship to modern sculpture."



For the Energy Concerned:

Energy, Environment and Building, Philip Stedman (Cambridge University Press, \$14.95 hardbound, \$5.95 paperback): Written as a report to the Academy of Natural Sciences of Philadelphia in anticipation of a new museum that will be designed according to energy conservation and ecologically sound principles. Here is common sense advice.

New Energy Technologies for Building, Richard S. Schoen et al. (Ballinger, \$12 hardbound, \$3.95 paperback): This provocative book, commissioned by the Energy Policy Project which was funded by the Ford Foundation, contends that widespread use of energy-saving technologies for building will be deterred by "long-term institutional forces within the construction industry" unless there is concerted effort at federal and state levels, with strong incentives and programs and further policy research.

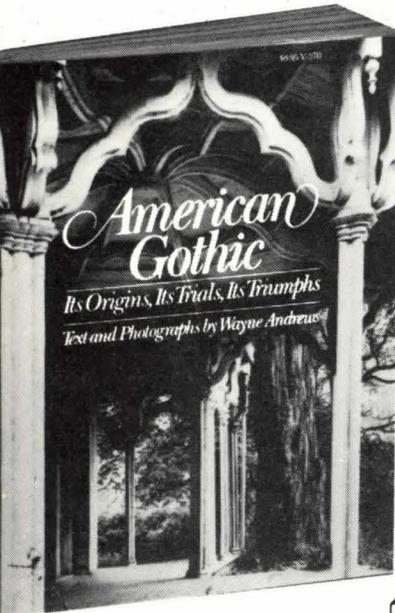
On Site/On Energy, Alison Sky and Michelle Stone, editors (Site, Inc., distributed by Scribner, \$6.95): The 36 contributors—artists, technicians and social philosophers—speak with freshness on the energy crisis and "a future of globally shared resources."

Solar Energy and Building, S. V. Szokolay (Wiley, no price given): A timely and comprehensive book that is the by-product of four years of research work in England. Reliable information on such topics as collective methods, economic factors, planning implications and design principles.

Solar Energy for Heating and Cooling of Buildings, Arthur R. Patton (Noyes Data Corp., \$24): This book pulls together and condenses data that are scattered among many publications, providing background information about solar energy and its use.

And in conclusion: Merry Christmas and Happy Reading. *M.E.O.*

A colorful account of the Gothic Revival in American architecture

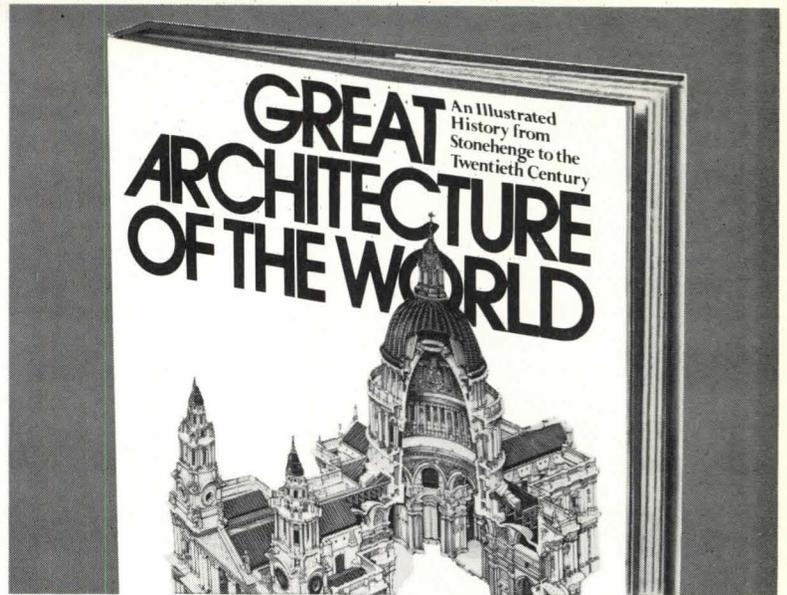


This striking book, illustrated with over ninety photographs, portrays the origins, growth and astonishing success of the Gothic Revival in American architecture. It shows how the movement, which began as a whim, grew in popularity and substance to influence the work of Frank Lloyd Wright, Eero Saarinen, and other modern American masters.

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Sommer from page 43

both camps is bound to be frustrated—the practitioner by the delays and triviality and endless discussions of the university, and the academic by the absence of long-range planning in office practice, the lack of time for serious research and the general chaos. This contrast can also be a source of enrichment for anyone willing to observe the strengths as well as the weaknesses of the other camp. I find that working to deadlines makes me a more responsible psychologist.

The same applies to the necessity of coming up with solutions rather than merely discussing problems and summarizing them in an overdue report. I enjoy the camaraderie and am challenged by problem-solving sessions which will actually influence the outcome of the project. However, I don't want to leave the impression that I am enthralled with the present situation of architecture. In my other writings, I have discussed at length the need for research and the value of architects attempting to learn what has been done before and how successful it has been. The leisurely time coordinates of academe which are so frustrating also provide time for adequate fact-finding, consultation and deliberation.

I am grateful to my architect colleagues for all they have taught me and for what I expect to learn in the future. I have no desire to become an architect myself, even in fantasy. I believe that I can make a more meaningful contribution to society and also to the design fields as a psychologist. Interdisciplinary collaboration does not mean the disappearance of separate professions but rather the recognition that each has something special to contribute.

What I have learned from architects has made me a better teacher of psychology students. When I taught abnormal psychology 15 years ago, I did not use a single illustration. Today, I use some kind of graphic material almost every lecture. Seeing a person who is terribly depressed or with the DT's makes the condition more tangible and meaningful. These are not merely verbal labels we are discussing but people who are hurting badly. I owe my interest in graphics as well as whatever skills I have acquired in using them to my association with designers.

It was not my intention to make this a *mea culpa* for social scientists. Whatever limitations to the academic approach and strengths of traditional design methods are described here are more than compensated for by criticisms of the latter and praise for the former in my other writings. Fruitful dialogue will require that each profession learn from the other. It seems time to pause in telling architects "everything they want to know about human behavior" and admit that psychologists have much to learn and architects much to teach. □

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LETTERS

Insurance in Perspective: The article on "Of Liability, Litigation and Insurance" in the July issue shows that we've created another monster to menace our survival.

It is so pathetic to see how we have become entangled in these man-made protective devices by relinquishing responsibility for our work and lives to some protective agency which, in turn, becomes a giant and ultimately destroys its creators.

To react to a fact instead of solving the problem is the lifestyle of the ostrich. The insurance industry is growing beyond one's imagination due to the fact that present laws allow anyone to enter any legal process in the exercise of constitutional rights. This fact overshadows any solution of the problem; as a result, we are only permitted to react to the challenge.

The time has come when we must see the problem in toto. To put the entire matter in a new perspective is the only salvation of our society. We have to use a realistic approach similar to a new type of laser which will dissect the problem.

When a business venture originates between an architect as designer and his client, both parties have a common goal. Both know the challenge; both take chances; both are aware that they may lose both monetarily and psychologically. The client has been drawn to the architect, in the first place, because of his work. By joining forces in the pursuit of a common goal, architect and client must have a full understanding that the venture has necessary risks in order to be successful and that they both may lose everything.

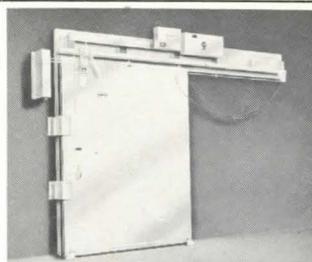
These facts are true, as the practice of architecture has proved. Then what right does either party have to destroy the collaborating partner of a venture? Is it dissatisfaction or revenge? Anyone with a sane mind can answer that question. It is revenge.

Is it not ridiculous, then, that our society and our judicial system endorse such a procedure? Are we living in a sane society? Is this a society of law and order? Is this the observance of protection of one's constitutional rights? I do not think so. I am convinced that our forefathers, the makers of the Constitution, never would have approved of such a condition in our society.

When we use the analytical laser to determine the common denominator of the problem, we suddenly find that the problem almost disappears. The complexity of the problem can be simplified also by determining its validity based on one principle. That principle is that if any error has been made by either party, was that error accidental or was it premedi-

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tated or planned? This should be determined prior to any legal process.

I believe that the "water bed" can be solidified if we begin our work with this approach.
*Emery G. Vass, AIA
West Palm Beach, Fla.*

The recent announcement that AIA is now endorsing project insurance for its members has already resulted in an enthusiastic response from architects across the country. For example, here's how the news could have been implemented immediately by architect Albie John Brown of Pensacola, Fla.

In a meeting to complete the terms of a contract with the chairman of the Escambia County School Board for a \$4.5 million high school, Brown said: "OK. Our fee will be 6 percent of the cost of construction. You understand, of course, that the board will need to furnish us a topo survey, soil boring test results and educational specs along with a complete program for the job. Also the 6 percent fee does not include reimbursable expenses such as cost of travel, printing plans and specs, project insurance . . ."

"Hold it," said the chairman of the board. "What is project insurance?"

"Oh, that's a new kind of insurance endorsed by AIA which provides protection for the architect on a project-by-project basis. It allows the client to pick up the tab."

"But don't you carry professional liability insurance?"

"Yes, but this sort of supplements the other."

"How much will it cost us?" the board chairman asked.

"Only \$8,200. A bargain!"

"I'm not sure the board will buy that. What does it protect us against?"

"Well, actually, it protects the architect, not the client. In case our plans contain any errors or omissions and we are sued, we are protected," explained the architect.

"But I can't see why we should pay a premium to protect you against a lawsuit. If you're not confident that you can design this building without being sued—especially if you already have liability insurance—the board may take a dim view of our selecting your firm."

"Look at it this way! We all make mistakes; if one of our mistakes results in a big lawsuit, you wouldn't want us to have inadequate insurance coverage, would you?"

"No. But I can't understand why, if you already carry professional liability insurance, we have to pay extra to have you do this job for us. Are all the architects going in for this project insurance?"

"Oh, I think so. Victor O. Schinnerer is very high on it. It's bound to be a good thing."

"Who is Victor O. Schinnerer?"

"The agency that sells project insurance to architects all over the country. They also sell the regular professional liability insurance, but this new plan, the way they explain it, allows us to get a credit on our regular insurance policy premium every time we get a client to pay extra for this project insurance. It's going to be a great thing for us if everybody goes along!"

"Tell you what, Brown. It may be great for you, but it isn't worth a damn for us. I'll give you eight to five that I can find an architect right here in town who won't stick us for this extra cost and who'll be glad to have this job. To prove my point, I'll let you know who he is just as soon as we settle with him. See you later."

*Hugh J. Leitch, AIA
Pensacola, Fla.*

We can appreciate Mr. Leitch's sense of humor about an admittedly difficult concept to present to clients in these days of economic adversity in the architectural profession.

However, unless the profession is willing to do something about placing the cost of professional liability insurance in its proper perspective as a cost of the client's project, it will continue to erode the profit margins of every practitioner as it becomes a larger and larger part of overhead. It should be noted that the "project" approach to professional liability insurance is consistent with the way contractors procure (and clients pay for it) their liability coverages on construction projects, and it is likewise completely in line with the cost-based compensation program being developed and promoted by AIA.

It may be of interest that we have been working with the New Jersey Society of Architects in their negotiations over a contract being developed by the New Jersey Division of Building and Construction, since that state agency apparently has accepted and is willing to reimburse architects for "project" professional liability insurance.

Further, we have been in contact with the State of Louisiana Facility Planning and Control Commission which has decided to adopt "project" professional liability insurance in its contracts. We recently visited with officers of IBM to discuss this approach for use in its design professional contracts. Even though IBM was not in a position to make a decision during the meeting, our presentation was received with substantial interest. Finally, we have met with the Division of Building Construction and Maintenance, Department of General Services, State of Florida, to discuss the project insurance approach for projects under its jurisdiction.

Although we agree that some clients may greet this proposal with an "I can get it cheaper elsewhere" reaction, our experience indicates that well presented discussions with serious-minded clients can

produce positive benefits for both the clients and the architectural profession.

*James R. Stevens
Vice President
Victor O. Schinnerer & Co.
Washington, D.C.*

Women in Architecture: Women architects and their relationship to AIA is one of those social/professional issues that will need a lot of thought, even with the facts in, to make affirmative action fruitful for women and men.

In the article titled "The Board Acts on the Role of Women in Architecture" by Andrea O. Dean in the March issue, there are several paragraphs at the end of the article about why women feel alienated from AIA. Missing and noteworthy, however, is the fact that women architects have started their own professional organizations. These were well documented in Ellen Berkeley Perry's landmark article, "Women in Architecture," in a 1972 issue of *Architectural Forum*. Since then, other organizations have appeared, such as the Organization of Women Architects/Design Professionals in the San Francisco Bay Area, active since Nov. 1972, to the astonishment and discomfort of AIA.

AIA's few attempts to absorb us have so far failed. With some thought, it is obvious that our strength comes from our independence, our small size, our horizontal organizational structure and our awareness of the social/psychological components to any profession.

It is great for AIA to have a task force on the status of women in the profession. How many on the task force are men? It has been my experience that AIA sees it as a women's problem—but it takes two to tango! AIA appears to pressure the few women that it does have to be responsible for it. Women may even be discriminated against or typed for working on such a controversial issue. AIA needs to look at itself, not just at women, to find ways to meaningfully arrive at its ethical goals—there is a lot more than meets even the critical eye!

Bravo to the task force who provoked the board to act. *Wendy Scott Bertrand
Oakland, Calif.*

More Words on DPE: There has been some question about the DPE factor to which reference is made in my article titled "Determining an Employee's True Compensation" in the June issue. The example shown indicated \$2,804 (23.4 percent) worth of benefits in addition to annual salary, or that the total compensation was 1.234 of annual salary (\$12,000 x 1.234 = \$14,804). This number is useful between employer and employee for understanding compensation but is not the DPE factor to be applied in the B141 contract.

In the paragraph on the DPE factor, I

EVENTS

- Dec. 1-3:** Institute on Value Engineering Techniques: Fast Diagramming, University of Wisconsin, Madison, Wis.
- Dec. 3-5:** Institute on Value Engineering Techniques: Function Cost, University of Wisconsin, Madison, Wis.
- Dec. 3-5:** Conference on Health Facility Planning and Design in Developing Countries, World Trade Center, New York City. Contact: Registrar, World Trade Institute, One World Trade Center, 55th Floor, New York, N.Y. 10048.
- Dec. 7-12:** Conference on Perspectives in Product Liability and Product Safety, Asilomar Conference Grounds, Pacific Grove, Calif. Contact: Engineering Foundation, 345 E. 47 St., New York, N.Y. 10017.
- Dec. 7-13:** Panamerican Congress of Architects, Mexico City. Contact: Maurice Payne, AIA, AIA Headquarters.
- Dec. 10-11:** Cutting Production Costs Laboratory, Sunnyvale, Calif. Contact: Continuing Education Department, AIA Headquarters.
- Dec. 31:** Postmark deadline, Library Buildings Awards program. Contact: Maria Murray, AIA Headquarters.
- Dec. 31:** Postmark deadline, Plywood Design Awards program. Contact: Ameri-

give the 25-year award for "enduring" significance to a glass house? (See May, p. 26.)

It would seem that there must be a building somewhere that exhibited innovative design for its time and at the same time significantly anticipated the energy problem to which AIA is now trying to find an answer. *Thomas K. Butt, AIA Point Richmond, Calif.*

Synagogue Architects: The Union of American Hebrew Congregations, which has maintained an architects advisory panel for more than 25 years (currently headed by Daniel Schwartzman, FAIA), is currently contemplating the publication of a book on significant synagogue buildings erected since 1965. It was UAHC which published *An American Synagogue for Today & Tomorrow* in 1954, edited by Peter Blake, and *Contemporary Synagogue Art: Developments in the U.S., 1945-65*, by Avram Kampf.

We would appreciate it if any architect who has designed a synagogue building in the last decade would communicate with us. It would be helpful not only to have the name and address of the congregation, but also photos, slides and floor plans.

*Myron E. Schoen
Union of American Hebrew
Congregations
838 Fifth Ave.
New York, N.Y. 10021*

said: "... From these you can find each individual's DPE factor (divide total compensation by annual salary) ..." I should have said: "... (divide total compensation by annual direct cost.)" Annual direct cost would be total compensation less all benefits listed in the second, third and fourth sections of the chart (\$14,804 less \$969.21 and \$1,890 and \$914 equals \$11,030.79 annual direct cost.) This divided into total compensation would yield a DPE factor of 1.342 which could be used in accordance with the B141 contract if all of the benefits indicated were allowable.

This can be checked by multiplying the hourly rate (\$5.77) by the number of direct hours (52 weeks times 40 hours = 2,080 hours minus 80 hours vacation, 40 hours sick leave, 48 hours holidays = 1,912 direct hours) by the DPE factor (1.342). $\$5.77 \times 1,912 \times 1.342 = \$14,804$ plus.

The real purpose of the form shown is to communicate between employer and employee. However, using the procedure shown, the firm DPE can be accurately ascertained. *James A. Greene, AIA Tampa, Fla.*

Glass Houses and Energy: I am confused. Could the same AIA that published "Energy and the Built Environment: A Gap in Current Strategies" and "A Nation of Energy Efficient Buildings by 1990"

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can Plywood Association, 1119 A St., Tacoma, Wash. 98401.

Jan. 5-16: Building Construction Institute, University of Wisconsin, Madison, Wis.

Jan. 15-17: AIA Grassroots East, Statler Hilton Hotel, Washington, D.C.

Jan. 18-22: National Association of Home Builders annual convention-exposition, Dallas Convention Center, Dallas. Contact: NAHB, 15th and M Sts. N.W., Washington, D.C. 20036.

Jan. 19-23: Course on Solar Energy Thermal Processes, University of Wisconsin, Madison, Wis.

Jan. 22-24: AIA Grassroots Central, Marquette Inn, Minneapolis/St. Paul, Minn.

Jan. 24-28: Solar Energy Industries Association workshops and product exhibit. Hyatt House, Los Angeles International Airport, Los Angeles, Calif.

Jan. 26-28: AIA Grassroots West, Hyatt Hotel on Union Square, San Francisco.

Jan. 29-30: A/E Federal Programs Conference, San Francisco. Contact: Marshall E. Purnell, AIA Headquarters.

Feb. 1: Registration deadline, international competition for architectural students for the design of a model community. Contact: John Bland, Professional Adviser, School of Architecture, McGill University, P.O. Box 6070, Station A, Montreal, Canada H3C 3G1.

GOING ON

Continued from page 13

time, local Seabee reservists suggested working on the project as part of their annual summer active duty. The idea was approved up through channels and Operation Silver Spike was born.

In the summer of 1974, 180 Seabees were involved, each one spending two weeks on site. They completed one and three-quarters miles of track and two bridges and moved the historic Silver Plume station.

Other branches of the U.S. military have also been involved. The Army provided logistical support to the Seabees last summer and the Marines moved a 75-year-old sawmill into the historic mining area in the fall of 1974.

The major project remaining is the biggest—the reconstruction of the high bridge, which was dismantled when the railroad was abandoned. An engineering firm has contracted to do the design, and cost estimates have ranged from \$275,000 to \$485,000, depending on whether or not the old bridge is duplicated. The Seabees hope to assist in the rebuilding.

This nearly \$2 million project has been

aided considerably by the donation of materials by several railroads and by the use of the U.S. military, which costs nothing. It is illustrative of the varied experience that the military is willing to use, subject to training requirements, to assist in civic action projects. In this case, the Seabees are able to improve their operational readiness; their mission is to provide construction expertise, including the building of railroads, but there are not too many places where they can get on-the-job training.

Some test runs of a steam locomotive and cars were made in the summer of 1975. Persons interested in the project may contact James E. Hartmann, Colorado State Historical Society, 200 14th Ave., Denver, Colo. 80203 (303) 321-7265. *Carleton Knight III*

Housing Grants

The closing date for the filing of applications for fund reservations by the Department of Housing and Urban Development for the construction or rehabilitation of housing for the elderly and the handicapped has been extended to Dec. 15. The original closing date was Nov. 14. The applicable legislation is Section 202 of the Housing Act of 1959, as amended.



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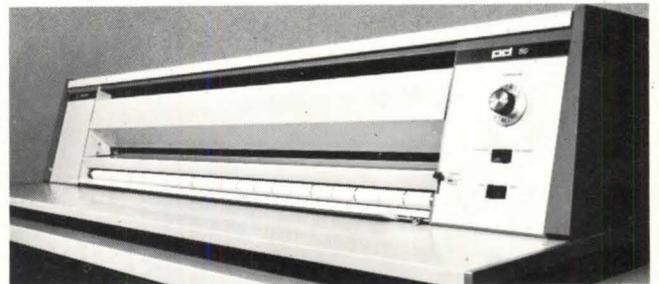
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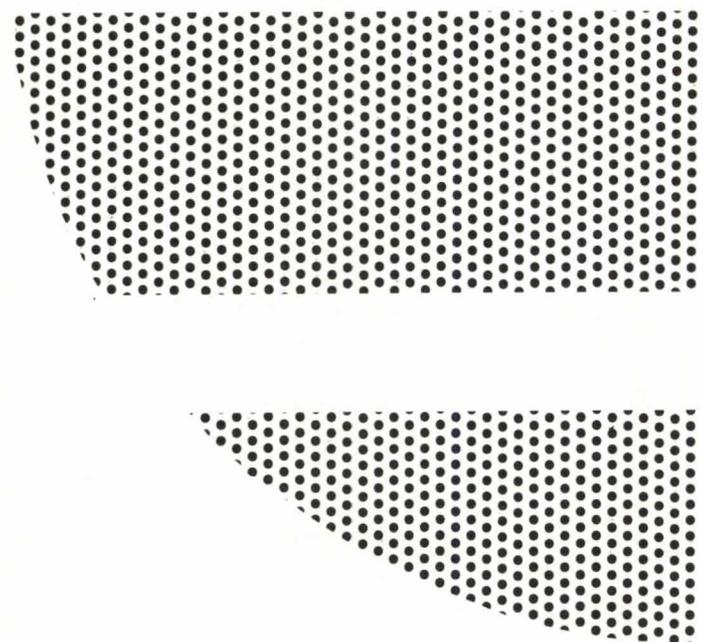
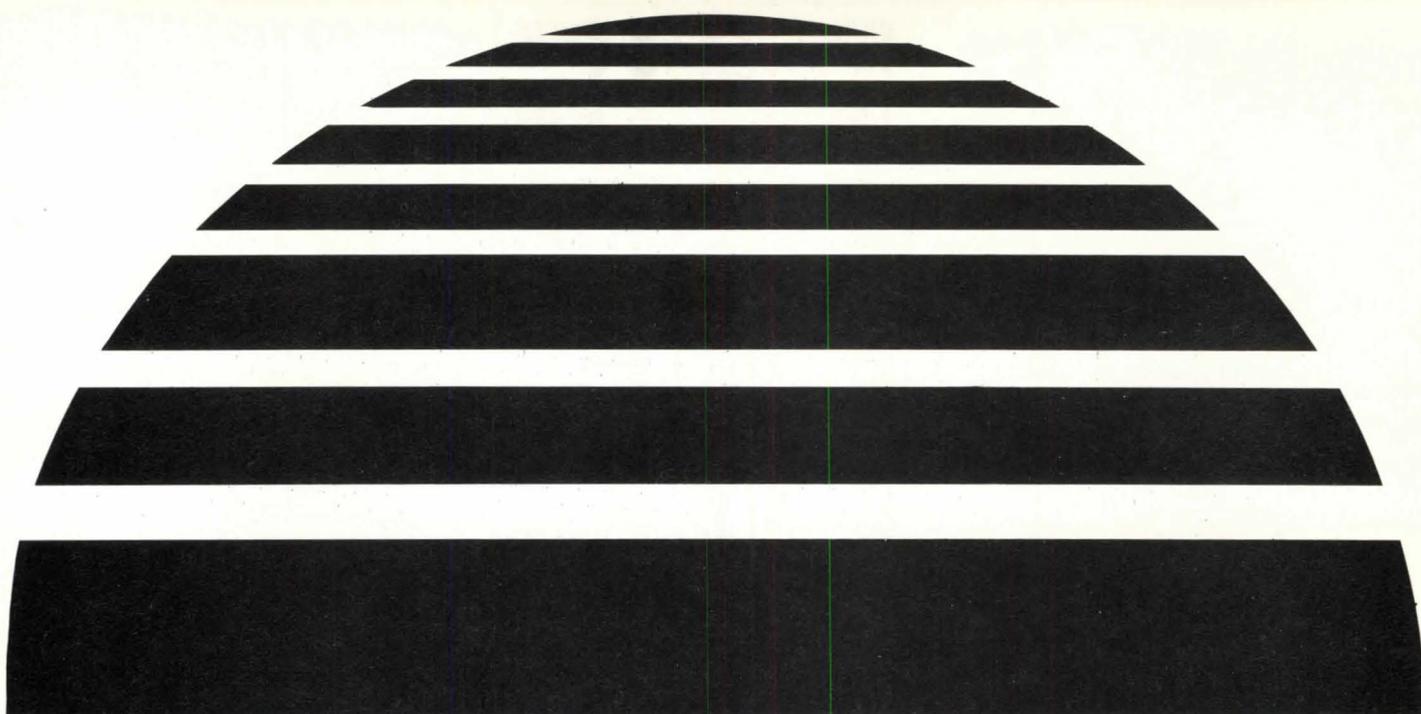
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NOV, 75 FORUM SOLAR DESIGN

Solar Energy is the theme for the 1975 ASC/AIA Student Forum, being held this year on the campus of Arizona State University, Nov. 23-29.

Participating in the Forum's Solar Energy workshops, discussions, and lectures is a long list of guest speakers, including Dr. Charles Backus and Professors John I. Yellott and Jeffrey Cook.

An additional highlight to this year's program are tours of Arcosanti, under the guidance of Paolo Soleri, and of Taliesin West with Mrs. Frank Lloyd Wright.

For further information, contact: The Forum Committee, Arizona State University, College of Architecture, Tempe, Arizona 85281.

AIA/ASC

AIA Plans Seminar at Builders' Convention

AIA will sponsor a special program on new concepts in housing design at the 32nd annual convention/exposition of the National Association of Home Builders in Dallas. The purposes of the program are to demonstrate how the builder can benefit from the services of an architect and to bring about a better understanding on the part of architects regarding the day-to-day problems that confront builders.

Larry Ellis, AIA, director of environmental design at NAHB, says that "a large segment of NAHB's 74,000 members are builders who construct 20 to 100 homes annually. In the past, these builders were able to develop profitable businesses without the expertise of architects and other planning specialists. However, today's complex economic, environmental and energy problems are forcing builders to consider new ideas and concepts in housing design and community development as they overhaul their building operations to meet the needs and demands of a new era."

At the four-day convention, which will open on Jan. 18, there will be some 60 programs of interest to architects, such as energy conservation, planned unit developments, mortgage financing and environmental and land use restrictions. Face-to-face encounters in workshops will permit architects, builders and other professionals to meet privately or in groups with government officials and other panelists to discuss problems of mutual concern.

Registration forms are available through NAHB's convention department, 15th and M Sts. N.W., Washington, D.C. 20005. Registration fee is \$50 for NAHB members and \$200 for nonmembers.

University Holds Design Competition

The architectural, planning and engineering firm of McCarthy Bullock Holsaple, Knoxville, Tenn., is winner of a two-stage architectural design competition for an \$8 million facility for the department of art and architecture at the University of Tennessee, Knoxville. The competition was limited to architects residing and practicing in the state of Tennessee.

Five finalists were selected in the first phase of the competition from among 43 entries to continue in the second stage. In addition to McCarthy Bullock Holsaple, the finalists were: William L. Jordan, AIA, Nashville; Morton & Sweetser, Knoxville; Max L. Valentine & Associates, Memphis, and Yeates & Gaskill, Memphis.

The winning design was commended by the jury for the manner in which "the

form of the building and its site planning creates an important outdoor space," linking the structure with other university buildings into a "pleasant campus quadrangle." The jury said: "The expression of the building is straightforward, free of affected forms and details. It is a logical constructivist structure which provides a relatively neutral background for viable and often-changing teaching programs."

Jury members were: Gerald McCue, FAIA, San Francisco; George W. Qualls, FAIA, Philadelphia; Bertrum M. Berenson, AIA, Cincinnati; Harry Wolf, AIA, Charlotte, N.C., and George Anselevicius, AIA, Cambridge, Mass. Clayton B. Dekle, FAIA, director of facilities planning for the University of Tennessee, was professional adviser.

Chapter Gathers Environmental Ideas

The Colorado Central chapter/AIA and the Denver Art Museum have collaborated on an exhibition that will be on view at the museum until Jan. 4. The exhibition shows in model and sketch form 80 of the best ideas submitted by Colorado residents for the betterment of the environment.

Early last year, the chapter's committee on environment '76 launched a statewide competition for the Colorado centennial/U.S. bicentennial year. The chapter called upon Colorado citizens to submit ideas for the improvement of the urban environment. Over 400 entries were received.

The 80 projects shown at the museum were submitted by residents from 8 to 80 years of age. Ideas include reuse and recycling of materials, traffic control, landscaping, river use and beautification, street furniture, playground forms and systems, in-city transportation, etc.

Implementation of winning ideas is being assisted financially and professionally, and the program is said to enjoy the support of many organizations, foundations and businesses throughout the state.

John M. Prosser, AIA, assistant dean of the college of environmental design at the University of Colorado and co-chairman of the project, says that the program "has shown that a professional organization, AIA, can—with the assistance of the local business community—inspire a sound community betterment program."

Deaths

Arthur W. Anderson, Alamo, Calif.

R. Daniel Hart, Pensacola, Fla.

F. W. Horn, Quincy, Ill.

Edward Johns, Atlanta

James I. Porter, Washington, D.C.

Karl Schwanzer, Hon. FAIA, Austria

John Roxburgh Smith, Hon. FAIA, Canada

Andrew G. Stoecker, Chicago

Newslines

Morton Hoppenfeld, AIA, has been named dean of the school of architecture and planning, University of New Mexico. He was the original planner of the new city of Columbia, Md., and most recently was director of planning for a regionwide, nonprofit project in Hartford, Conn.

A \$16,000 scholarship fund has been established with the department of architecture, University of Southern California, in memory of S. Kenneth Johnson, FAIA. One student will be designated every two years for the scholarship. In addition, DMJM will offer in-office training to the selected student.

Craig Thomson was the 1975 recipient of the Andrew J. Ferendino student scholarship award, established by the firm of Ferendino/Grafton/Spillis/Candela. The award is a work-travel grant that provides the outstanding student of the University of Florida department of architecture with summer employment with the firm and \$1,000 for travel.

The Nation's first model code guidelines for the rehabilitation of existing residential property has been prepared by the Building Officials & Code Administrators International. Titled "Code Enforcement Guidelines for Residential Rehabilitation," the booklet outlines minimum requirements for such aspects as site conditions, means of egress and mechanical systems. It is available for \$3.25 (\$2.50 to BOCA members) from BOCA, 1313 E. 60 St., Chicago, Ill. 60637.

The Office of Mies van der Rohe, a Chicago architectural partnership, has changed its name to Fujikawa Conterato Lohan & Associates. The original firm was established in 1940 when Mies van der Rohe formalized a partnership with his associates Joseph Fujikawa, AIA; Bruno Conterato, FAIA, and Dirk Lohan, AIA.

The Northern California chapter/AIA has produced a 1976 calendar for a twin bicentennial celebration: that of the nation and of the founding of the city of San Francisco. Titled "Old San Francisco," the calendar includes an 1853 map of the city and 12 historic photographs. The calendars cost \$3.25 each (plus 20 cents tax for California residents); orders may be placed with the chapter, 254 Sutter St., San Francisco 94108.

Tornado damage is depicted in a new slide/lecture show, available from the Portland Cement Association. It shows the behavior of various types of construction in the worst tornado in Ohio's history. The accompanying lecture stresses lessons

to be learned regarding construction practices. Titled "The Xenia Tornado Disaster and Concrete," the 37 slides and narration may be ordered for \$50 from PCI, Old Orchard Road, Skokie, Ill. 60076.

Paul D. Spreiregen, AIA, of Washington, D.C., conducts a five-minute weekly radio program called "Places for People" on the National Public Radio System. His lectures on architecture, environmental design and planning are heard over two-thirds of NPR's 175 stations.

John Lautner Jr., FAIA, of Los Angeles, is the recipient of a distinguished alumni award given by Northern Michigan University.

Joseph Esherick, FAIA, a principal and president of the San Francisco-based firm of Esherick Homsey Dodge & Davis, has been appointed a special consultant on architectural design matters for the Department of State's foreign buildings operations. His services will be directed toward the design for diplomatic and consular establishments to be constructed in foreign countries.

"Downtown: Heart of Our Cities" is the title of a new slide film which illustrates the kinds of problems the downtown has and what some cities are doing about

them. Consisting of 80 slides with script, the presentation may be bought for \$39 from Downtown Research and Development Center, 555 Madison Ave., New York, N.Y. 10022.

The Association of Collegiate Schools of Architecture has named Bertram Berenson, AIA, as its president for a one-year term. ASCA vice president and president elect is Donlyn Lyndon, AIA, professor of architecture at the Massachusetts Institute of Technology.

Isadore Rosenfield, FAIA, is the recipient of an award from the American Association of Hospital Planning "in recognition and appreciation of his distinguished contribution to hospital planning and the health of the American people."

The Illinois Council/AIA is accepting applications for the position of a full-time executive director to administer the activities of its office in Chicago. Resumes may be sent to the Illinois Council/AIA, 1800 S. Prairie Ave., Chicago, Ill. 60616.

George J. Mann, AIA, has been appointed associate professor of architecture and planning and director of the health services planning and design program at the Columbia University graduate school of architecture and planning. He has opened

a New York City office of RPD (Resource Planning and Development), of which he is president.

Building Officials & Code Administrators International has available at no cost a new *Publications Catalog*. It provides up-to-date listings and prices on *Basic Code* series, textbooks, manuals and other publications designed to assist code administration and enforcement. A copy may be obtained from BOCA, 1313 E. 60 St., Chicago, Ill. 60637.

John D. Henderson, AIA, of the San Diego, Calif., firm of Delawie, Macy & Henderson, was recently elected as chairman of the advisory board to the Historic American Buildings Survey, National Park Service. George A. McMath, AIA, of Portland, Ore., was elected vice-chairman and Dr. John Douglas Forbes, of Charlottesville, Va., was named secretary.

The Iron Castings Society is a newly formed organization made up of more than 200 foundry executives. The society will provide a "single source for technical, marketing, financial and general industry information." Dan E. Johnson, of Neenah, Wis., was elected president of the society at the founding meeting. The society is located at 20611 Center Ridge Road, Rocky River, Ohio 44116. □

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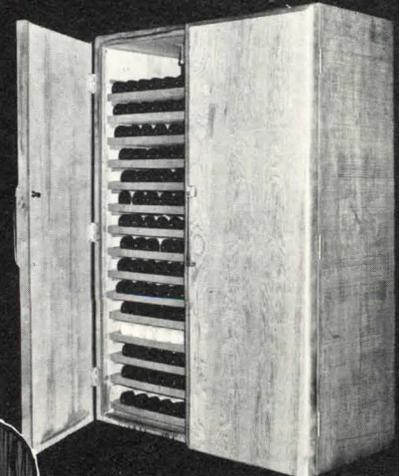
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commercial strip with high crime, which has spread to neighboring residential areas.

As Rau explained it, the following were among the planned changes: new supplemental lighting; new bus shelters in areas of high day and night activity; "safe passage" corridors, linking commercial and residential areas; a pedestrian shelter at the end of at least one safe passage corridor, and a minimall. The project also calls for citizen participation in the form of encouraging residents to report crime and join a "block house" program. Participants in the program post approved identifying notices on their houses indicating that pedestrians who feel threatened will be offered safe refuge.

The security system of San Francisco's BART system has been developed and implemented with LEAA assistance. With 75 miles of track and 34 stations, BART was the subject of an enormously complex, \$1.6 million security project relying on well-lighted, open spaces, free of nooks and crannies where criminals can hide. Surveillance is carried out by security police and computerized surveillance hardware systems.

The following were among recommendations made to LEAA by seminar participants:

"Visual access underlies our ideas of prevention," said Willard Pistler, AIA, of Cleveland, speaking for the discussion group he chaired at the seminar. His group recommended making provision for round-the-clock activity and multiuse buildings; designing streets to limit opportunities for access and escape by strangers; providing more than one entrance to restrooms to prevent criminals from taking them over; designing well-lighted short entranceways from parking lots; furnishing places for recreation (boredom leads to vandalism), and integrating mechanical security systems into buildings (preferably types requiring minimal maintenance).

The discussion group led by George Sprinkle, AIA, of Phoenix, put emphasis on reinforcing the family and neighborhood units. "Design should support the family," he said, and his group's recommendations echoed Oscar Newman's list of requisites for making an area more secure. He added that new ways must be found to secure tall buildings, and suggested as a possibility the French system of having a "conciierge" to keep an eye on people and things. Suggested Morton Leeds of HUD, "We should return to a system where someone living on the premises is responsible to people. You can train normal maintenance guys to make buildings secure by teaching them basics of social process." Sprinkle and others urged LEAA to assist in creation of standards and codes for safe housing.

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